

US 70 IMPROVEMENTS
From Four Lanes at Radio Island
to North of Beaufort Near Olga Road (SR 1429)
Beaufort, Carteret County
Federal-Aid Project No. STPNHF-70(43)
WBS No. 34528.1.1
State Project No. 8.1162501
TIP No. R-3307

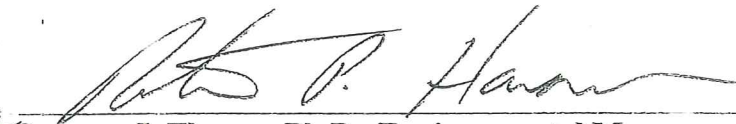
ADMINISTRATIVE ACTION
ENVIRONMENTAL ASSESSMENT

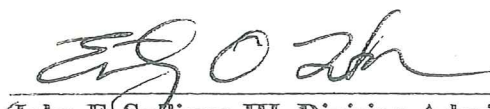
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
N. C. DEPARTMENT OF TRANSPORTATION

submitted pursuant to 42 U.S.C. 4332(2) (c)



APPROVED:

10/13/04 
Date ^{for} Gregory J. Thorpe, Ph.D., Environmental Management Director
Project Development and Environmental Analysis Branch, NCDOT

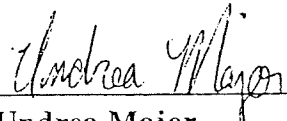
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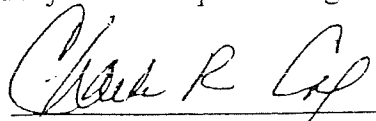
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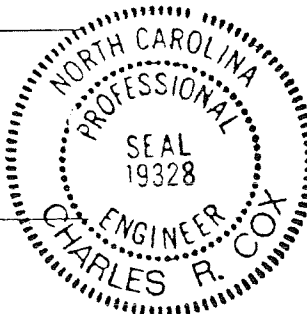
October 2004

Documentation prepared in the Project Development and Environmental Analysis Branch
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10/13/04



PROJECT COMMITMENTS

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Roadway Design Unit/ Hydraulics Unit/ Roadside Environmental Unit/ Division 3

NCDOT's Aquatic High Quality Resource avoidance and minimization guidance will be implemented.

Roadway Design Unit/ Division 3

The project will include 3:1 fill slopes in wetland areas to eliminate the need for guardrail.

Division 3

NCDOT will implement the "Precautions For General Construction In Areas Which May Be Used By The West Indian Manatee In North Carolina." These conditions are outlined in Section VI.D.1.c of this Environmental Assessment. NCDOT will make every effort to schedule in-water construction from November until May when manatees are not likely to be in North Carolina Waters.

Division 3/ Bridge Maintenance Unit

If the existing drawbridge is removed, NCDOT will take precautions to limit debris from dropping into Waters of the U.S. Some temporary fill is anticipated from demolishing the bascule piers and machinery rooms.

Project Development & Environmental Analysis Branch/ Roadway Design Unit

If Alternatives 2A – 2E are selected for the project, NCDOT will coordinate the proposed design with N.C Maritime Museum officials to minimize the project's effect on the future museum site (see discussion in Section VII.C of this Environmental Assessment).

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SUMMARY

1. Type of Action

This is a Federal Environmental Assessment.

2. Description of Action

The North Carolina Department of Transportation (NCDOT) proposes to improve US 70 in the Beaufort area to a multilane facility (refer to Appendix A, Figures 1 and 2 for project location). The project will replace the existing drawbridge over Gallants Channel with a high-rise or mid-rise bridge and extend US 70 as a multilane facility from four lanes at Radio Island to near Olga Road (SR 1429), a length of 5.9 kilometers (3.7 miles). These improvements are proposed to eliminate travel delays occurring at the drawbridge and to increase the traffic carrying capacity of US 70.

The project is included in the approved 2004-2010 Transportation Improvement Program (TIP). The current estimated TIP cost is \$43,800,000, which includes \$8,100,000 for right of way acquisition, and \$35,700,000 for construction. Current cost estimates can be found in Table 5 of this document. The project is scheduled for right of way acquisition to begin in fiscal year (FY) 2008 and construction to begin post year beyond 2010.

3. Alternatives Considered

a. Build Alternatives

The following alternatives are currently being considered for the project (see Table 5 and Appendix A, Figure 2A, 2B, 2C). The following relate to all alternatives:

- Replacement of the existing bridge with a four-lane bridge with 1.2-m (4-ft) painted median (See Figure 6A)
- Typical section for new location segments will include four-lanes with a median (see Figure 6B)
- Typical section for widening US 70 will include four lanes with a median (see Figure 6C)

- Turner Street will be widened to three lanes to maintain access between the proposed highway and downtown Beaufort (See Figure 6D)
- West Beaufort Road will be widened/ realigned

(1.) Alternative 1A

Alternative 1A replaces the existing Gallants Channel drawbridge with a high-rise bridge just north of Cedar Street. The proposed bridge provides 19.81 meters (65 feet) of vertical navigational clearance. This alternative includes a four-lane, median-divided roadway on new location from near Stanton Road to north of Shell Landing Road (SR 1301).

(2.) Alternative 1E

Alternative 1E is the same as Alternative 1A from Radio Island to West Beaufort Road. The new location portion of this alternative turns south and ties back into existing US 70 near Piners Point Road (SR1303). The proposed bridge provides 19.81 meters (65 feet) of navigational clearance. Alternative 1E provides a more northern alignment from Stanton Road to east of NC 101.

(3.) Alternative 2A

Alternative 2A replaces the drawbridge with a four-lane high-rise bridge and connects with existing West Beaufort Road. The proposed bridge provides either 13.6 or 19.81 meters (45 or 65 feet) of navigational clearance. This alternative includes a four-lane median-divided roadway around the perimeter of the airport and then follows the same alignment Alternative 1A near NC 101.

(4.) Alternative 2D

Alternative 2D is the same as Alternative 2A from Radio Island to Stanton Road and from east of NC 101 to north of Shell Landing Road. The proposed bridge provides either 13.6 or 19.81 meters (45 or 65 feet) of navigational clearance. Alternative 2D provides a more northern alignment from Stanton Road to east of NC 101, than Alternative 2A.

(5.) Alternative 2E

Alternative 2E is the same as Alternative 2D from Radio Island to Stanton Road and then follows the same alignment as Alternative 1E.

4. Summary of Environmental Impacts

The proposed improvements will improve traffic movement, reduce accidents, reduce delays, and increase accessibility within this area of the County. These improvements will benefit the region by increasing convenience and ease of travel for US 70 between Morehead City and eastern Carteret County.

No impacts to archaeological resources will occur. No federally-protected species will be affected by the project. Traffic noise impacts range from 27 residences and businesses to 106 residences and businesses (depending on the alternative chosen). No noise abatement measures are recommended. The number of residential and business relocations range from 30 to 97. Wetland impacts range from 2.2 hectares (5.4 acres) to 5.2 hectares (12.9 acres). Alternatives 1A and 1E will have an adverse effect on the Beaufort historic district, while all five alternatives will have an adverse effect on the Carteret County Home.

5. Recommended Alternative

No alternative is recommended at this time. All five remaining "construction" alternatives will be shown to the general public at the public hearing. A decision will be made after the hearing.

6. Coordination

The following Federal, state, and local agencies were consulted during the preparation of this environmental assessment. Written comments were received and considered from agencies with an asterisk (*) during the preparation of the assessment.

- *U.S. Army Corps of Engineers
- *U.S. Coast Guard
- *U.S. Fish and Wildlife Service
- *State Clearinghouse
- *N.C. Department of Cultural Resources
- *N.C. Department of Environment and Natural Resources
- *N.C. Department of Public Instruction
- Region P Planning Agency
- Carteret County Commissioners
- *Carteret County Transportation Committee
- *Town of Beaufort

7. Permits Required

It is anticipated the proposed improvements will require a Department of the Army Individual Section 404 Permit. The U.S. Army Corps of Engineers will determine final permit decisions.

A permit from the U.S. Coast Guard is required for the project.

A 401 Water Quality Certification, administered through the Department of Environment and Natural Resources (DENR), will also be required for the project since a federal permit is involved.

A Coastal Area Management Act (CAMA) Permit will also be required from the DENR Division of Coastal Management.

8. Additional Information

Additional information concerning the proposal and assessment can be obtained by contacting the following individuals:

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I. DESCRIPTION OF PROPOSED ACTION

The North Carolina Department of Transportation (NCDOT) proposes to improve US 70 in the Beaufort area to a multilane facility (see Appendix A, Figures 1 and 2 for project location). The project will replace the existing drawbridge over Gallants Channel with a high-rise or mid-rise bridge and improve US 70 to a multilane facility from the existing four lanes at Radio Island to near Olga Road (SR 1429), a length of 5.9 kilometers (3.7 miles). These improvements are proposed to eliminate travel delays occurring at the drawbridge and to increase the traffic carrying capacity of US 70 through the town of Beaufort.

The project is included in the approved 2004-2010 Transportation Improvement Program (TIP). The estimated TIP cost is \$43,800,000, which includes \$8,100,000 for right of way acquisition, and \$35,700,000 for construction. Current total cost estimates range from \$53,155,000 to \$69,096,000 (see Section IV, Table 5). Right of way acquisition is scheduled to begin in fiscal year (FY) 2008 and construction to begin post year beyond 2010.

II. NEED FOR THE PROPOSED PROJECT

The need for the project is based on four main areas: traffic volumes/capacity; delays due to drawbridge; accident history; and regional planning.

A. Traffic Volumes and Capacity Analysis

Average summer weekday traffic volumes have been used for the project analysis to reflect a portion of the peak season traffic. The summer weekday traffic estimates are approximately 22 percent higher than the Average Annual Daily Traffic. The 2004 average summer weekday traffic volumes for US 70 ranged from 11,500 vehicles per day (vpd) near Olga Road (SR 1429) to 27,600 vpd near Gallants Channel. Based on traffic modeling and current growth, the 2025 year volumes will range from 18,000 vpd to 42,400 vpd at these same locations. The estimated traffic volumes are shown in Appendix A, Figures 4A – 4B.

The level of service (LOS) of a roadway is a measure of its traffic carrying ability. Levels of service range from LOS A to F. Level of service A, represents unrestricted maneuverability and operating speeds. Level of service B represents reduced maneuverability and normal operating speeds. Level of service C represents restricted maneuvering and operating speeds close to the speed limit. Level of service D represents severely restricted maneuvering and unstable, low operating speeds. Level of service E represents operating conditions at or near the capacity level. Breakdown conditions are characterized by stop and go travel; this occurs at level of service F. The “no build” alternative for this project yields levels of service ranging from LOS D to LOS F for the design year of 2025. Mainline levels of service for the design year can be viewed in Table 6 of this document, while Table 7 shows levels of service for intersections.

B. Drawbridge Openings and Boating Usage

The Gallants Channel Drawbridge is one of 14 remaining drawbridges in North Carolina. Based on drawbridge opening data for the year 2003, the Gallants Channel Drawbridge ranked second in the highest number of openings, behind the Alligator River Drawbridge on US 64 in Tyrrell County.

The opening schedule for the drawbridge has been revised in the past two years. The current operation is as follows: from 6:00 a.m. until 10:00 p.m., the drawbridge is scheduled to open once an hour at half past the hour if a boat signals the bridge operator. On weekdays, during the morning and evening weekday peak hours (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.), the bridge remains closed. From 10:00 p.m. until 6:00 a.m., the drawbridge opens whenever a boat signals the operator. Each bridge opening generally lasts 4 minutes.

The number of boats and the number of bridge openings are summarized below in Table 1.

Table 1
Drawbridge Openings – Monthly Summary

2001 Bridge Openings

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of Boats	124	138	171	526	947	1072	1119	956	835	793	678	205	7564
Number of Openings	135	117	147	391	603	690	722	674	514	457	424	163	5037

2002 Bridge Openings

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of Boats	101	92	242	433	811	976	895	785	554	688	476	307	6360
Number of Openings	91	89	193	328	491	566	554	521	389	451	307	222	4202

2003 Bridge Openings

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of Boats	94	65	138	395	741	756	758	731	464	660	539	373	5714
Number of Openings	82	62	121	292	472	499	499	502	325	408	348	238	3848

The above data shows a higher number of boats that pass through the bridge opening from May to August of each year. May through August are peak months because of the popularity of tourism and vacationing in the Beaufort-Morehead City area. From 2001 to 2003 there was a decrease in the amount of drawbridge openings. This trend is due to changes in the drawbridge-opening schedule. The changes were made to allow fewer traffic delays at the bridge throughout the day. While fewer openings have caused fewer delays, the issue of automobile backup remains prevalent. It is anticipated that the increase of traffic combined with the continued openings of the drawbridge will contribute to more traffic delays and congestion in the future.

C. Anticipated Safety Issues

During the period from January 2000 to January 2003, 236 reported accidents occurred along US 70 within the project area. Of these, 102 accidents (43 percent) were rear-end collisions, 27 (11 percent) were left turn accidents, 48 (20 percent) were angle collisions, 5 (2 percent) involved vehicles running off the road, 7 (3 percent) were right-turn accidents, 18 (8 percent) were sideswipe, same direction. These accident patterns accounted for 86 percent of all reported accidents occurring along the facility. No fatalities occurred.

Table 2 compares US 70 accident rates to the statewide average rates for similar facilities.

Table 2
Accident Rates Along US 70
 (Accidents per 100 million vehicle miles)

Accident Type	Rate Along US 70	Urban Primary Routes Statewide Average
Fatal	0.0	0.8
Nonfatal Injury	180.13	132.0
Nighttime	45.99	59.2
Wet Conditions	57.49	67.0
Total Rate	452.23	311.2

The total accident rate for US 70 is 452.23 accidents per 100 million vehicle miles. This rate is higher than the statewide average for similar facilities. The proposed improvements to US 70 will promote safer traffic operations.

D. Route Classification and Thoroughfare Plan

US 70 is classified as a principal arterial on the North Carolina Functional Classification System. Between Raleigh and Morehead City, US 70 is a component of the Strategic Highway Network (STRAHNET). Within the project area, US 70 is not included on the National Highway System, but is designated as a major thoroughfare on the Crystal Coast Transportation Plan. This route serves local traffic between Morehead City, Beaufort, and communities along US 70 East. This route serves regional through traffic and Crystal Coast recreational traffic. The project area serves N.C. Port traffic and may potentially include future traffic from the Global Transpark in Kinston.

E. Purpose of the Project

The purpose of this project is to increase the traffic carrying capacity of US 70 and to eliminate delays to both boating and vehicular traffic due to drawbridge openings. The project corridor is an important route for local and regional commuter and recreational travel. To meet the increasing traffic demand and to reduce travel delays, improvements are warranted for this corridor.

III. EXISTING ROADWAY INVENTORY

A. Cross Sections

The existing roadway dimensions are listed below in Table 3.

Table 3
US 70 – Existing Typical Sections

Location	Typical Section	Dimensions
-West of Pivers Island Road (SR 1208)	-Four-lane divided shoulder section with grass median	-3.6-meter (24-foot) travel ways 4.8-meter (16-foot) median 3-meter (10-foot) shoulders
-SR 1208 to Moore Street	-Two-lane shoulder section	-7.2-meter (24-foot) roadway 3-meter (10-foot) shoulders
-Moore Street to NC 101	-Four-lane undivided curb and gutter section	-13.2-meter (44-foot) roadway curb and gutter
-NC 101 to Wellons Drive	-Three-lane shoulder section	-10.8-meter (36-foot) roadway with 3.6-meter (12-foot) shoulders
-Wellons Drive to near Olga Road (SR 1429)	-Two-lane shoulder section	-7.2-meter (24-foot) roadway 3.6-meter (12-foot) shoulders

B. Right of Way and Access Control

The existing right of way along US 70 in the project area varies from 18.3 to 61 meters (60 to 200 feet). A 61-meter (200-foot) right of way exists at the western limit of the project on the Radio Island Causeway. The right of way gradually reduces to 30.5 meters (100 feet) near the Moore Street intersection. An 18.3-meter (60-foot) right of way exists from Moore Street to the eastern project limit near Olga Road (SR 1429). No control of access exists along this route.

C. Intersections and Type of Control

The following roads intersect the subject portion of US 70 at grade:

Table 4
At Grade Intersections With Existing US 70

Name	Currently Signalized
Pivers Island Road (SR 1208)	No
Moore Street	No
Orange Street	No
Turner Street (SR 1174)	Yes
Craven Street	No
Queen Street	No
Pollack Street	No
Marsh Street	No
Live Oak Street	Yes
Pine Street	No
Mulberry Street	Yes
First Street	No
North Avenue	No
Second Street	No
Third Street	No
Circle Drive	No
George Street	No
NC 101	No
Center Drive	No
Carteret Drive	No
Short Street	No
Marshals Road	No
Campen Road	Yes
Wellons Drive	No
Pinners Point Road (SR 1303)	No
Pearl Drive (SR 1459)	No
Shell Landing Road (SR 1301)	No
Olga Road (SR 1429)	No

D. Railroad Crossings

On the Radio Island causeway, the State Port Railroad is located parallel to US 70 along the south side of the roadway. This line does not cross Gallants Channel to provide rail access to Beaufort. US 70 does not cross this railroad line within the project limits.

E. Structures

Bridge Number 29 over Gallants Channel was built in 1957. The bridge's bascule span of the simple trunnion design is unique in that it is the only bridge in North Carolina of its kind with the Hopkins drive system. Though it is identified as the youngest of four bascule bridges in the pre-1961 inventory, this bridge is eligible for the National Register of Historic Places because of its unique design. This structure has a sufficiency rating of 45.9 out of a possible 100 score. This bridge consists of reinforced concrete deck girders with a central bascule draw span, supported by reinforced concrete caps and piers with vertical concrete abutments. The bridge is 205 meters (673 feet) long with 15 spans at 11.6 meters (38 feet) and a bascule span of 43 meters (141 feet). The crest of the bridge is approximately 12 meters (40 feet) above the bed of the channel. Approximately 4 meters (13 feet) of vertical navigational clearance exists between the low chord and mean high tide elevation.

Structure P105 is a pipe arch culvert located at Turner Street and Town Creek. This culvert was constructed in the year 2000 and consists of four 2400 by 1650 millimeter (95 by 67-inch) corrugated aluminum pipes that are 18.3 meters (60 feet) long.

F. Speed Limits

A 70 kilometer per hour (km/h) [45 mile per hour (mph)] speed limit exists from the western project limit on Radio Island to west of the drawbridge. The speed limit reduces to 60 km/h (35 mph) from west of the drawbridge to Pinners Point Road. The speed limit is 70 km/h (45 mph) from Pinners Point Road to east of Pearl Drive and is 90 km/h (55 mph) from east of Pearl Drive to east of Olga Road. During school hours, a 40 km/h (25 mph) speed zone exists in the vicinity of the Beaufort Elementary School.

G. Utilities

Utilities within the project area consist of aerial power lines, underground telephone and fiberoptic cable, cable television, water lines, and sewer lines. High-tension power line towers are located along the north side of US 70 between Pivers Island Road and Moore Street. Impacts to utilities are expected to be high.

H. Sidewalks

Sidewalks exist along Cedar Street from Moore Street to Live Oak Street and along Live Oak Street from Cedar Street to Third Street. Sidewalks also exist along both sides of Turner Street from Cedar Street to north of Pine Street.

I. Bicycle Provisions

A 9.5-kilometer (6-mile) signed bicycle route exists in Beaufort. The Turner Street and West Beaufort Road sections of the bicycle route are located within the project

area. This route follows less busy neighborhood streets to provide access to points of interest, schools, shopping areas, the waterfront, and the historic district. Connecting routes extend along Front Street to toward Freedom Park and Jaycee Park, east of the Beaufort waterfront.

J. Greenways

No existing or proposed greenways are within the project area.

K. School Buses

Approximately 12 school buses use the subject portion of US 70 twice each day. These buses service Beaufort Elementary School, Beaufort Middle School, and East Carteret High School.

L. Other TIP Projects In The Area

Project R-3624, located within the project area, will relocate a portion of NC 101 to accommodate the extension of runway No. 26 at the Beaufort-Morehead City Airport. Other projects in the vicinity of R-3307 include bridge replacement projects B-4722, B-3428, and B-4335. B-4722 will replace bridge No. 33 over the North River. B-3428 will replace bridge No. 27 over Black Creek and B-4335 will replace bridge No. 46 on Oakleaf Drive over the McNeil Inlet. Other notable projects in the county, but not the study area are R-4431 (Havelock to Beaufort) and R-3437 (connector for US 70 to NC 101 in Newport), will be new location routes.

IV. ALTERNATIVES TO THE PROPOSED ACTION

A. Proposed Construction Alternatives Still Under Consideration

The following alternatives are currently being considered for the project (see Table 5 and Appendix A, Figure 2A, 2B, 2C). The following relate to all alternatives:

- Replacement of the existing bridge with a four-lane bridge with 1.2-m (4-ft) painted median (See Figure 6A)
- Typical section for new location segments will include four-lanes with a median (see Figure 6B)
- Typical section for widening US 70 will include four lanes with a median (see Figure 6C)
- Turner Street will be widened to three lanes to maintain access between the proposed highway and downtown Beaufort (See Figure 6D)
- West Beaufort Road will be widened/ realigned

1. Alternative 1A

Alternative 1A replaces the existing Gallants Channel drawbridge with a high-rise bridge just north of Cedar Street. The proposed bridge provides 19.81 meters (65 feet) of vertical navigational clearance. This alternative includes a four-lane, median-divided roadway on new location from near Stanton Road to north of Shell Landing Road (SR 1301).

2. Alternative 1E

Alternative 1E is the same as Alternative 1A from Radio Island to West Beaufort Road. The new location portion of this alternative turns south and ties back into existing US 70 near Piners Point Road (SR1303). The proposed bridge provides 19.81 meters (65 feet) of navigational clearance. Alternative 1E provides a more northern alignment from Stanton Road to east of NC 101.

3. Alternative 2A

Alternative 2A replaces the drawbridge with a four-lane high-rise bridge and connects with existing West Beaufort Road. The proposed bridge provides either 13.6 or 19.81 meters (45 or 65 feet) of navigational clearance. This alternative includes a four-lane median-divided roadway around the perimeter of the airport and then follows the same alignment Alternative 1A near NC 101.

4. Alternative 2D

Alternative 2D is the same as Alternative 2A from Radio Island to Stanton Road and from east of NC 101 to north of Shell Landing Road. The proposed bridge provides either 13.6 or 19.81 meters (45 or 65 feet) of navigational clearance. Alternative 2D provides a more northern alignment from Stanton Road to east of NC 101, than Alternative 2A.

5. Alternative 2E

Alternative 2E is the same as Alternative 2D from Radio Island to Stanton Road and then follows the same alignment as Alternative 1E.

Table 5
Comparison of Alternatives

	Alternative 1A	Alternative 1E	Alternative 2A	Alternative 2D	Alternative 2E
Cost					
Right of Way	\$13,600,000	\$19,050,000	\$ 9,425,000	\$11,950,000	\$14,650,000
Construction	\$48,300,000	\$49,800,000	\$43,000,000	\$43,300,000	\$44,500,000
Mitigation	\$ 359,000	\$ 246,000	\$ 730,000	\$ 653,000	\$ 551,000
Total	\$62,259,000	\$69,096,000	\$53,155,000	\$55,903,000	\$59,701,000
Relocates					
Residences	56	84	25	57	53
Businesses	5	12	5	9	12
NonProfit	1	1	0	0	0
Total	62	97	30	60	65
Section 4(f) Resources					
Historic Effects	None AE-BHD AE-CCH	None AE-BHD AE-CCH	None NAE-BHD AE-CCH	None NAE-BHD AE-CCH	None NAE-BHD AE-CCH
Wetland Impacts	Hectares(Acres)				
Salt Marsh	0.2 (0.5)	0.2 (0.5)	0.8 (2.0)	0.8 (2.0)	0.8 (2.0)
Freshwater	4.1 (10.0)	2.1 (5.3)	4.4 (10.9)	(3.1 (7.7)	1.4 (3.4)
Total Wetlands	4.3 (10.5)	2.3 (5.8)	5.2 (12.9)	3.9 (9.7)	2.2 (5.4)
Environmental Justice Potential	Yes	Yes	No	No	No
Noise Receptors Impacted	27	46	28	29	52

AE- Adverse Effect, NAE- No Adverse Effect, NE- No Effect

BHD- Beaufort Historic District (National Register), CCH- Carteret County Home (National Register)

B. Alternatives Eliminated From Further Consideration

1. Alternative 1B

Alternative 1B is the same as Alternative 1A from Radio Island to NC 101 and then cuts across the Carteret County School and ties into US 70 near Pinners Point Road. The proposed bridge provides 19.81 meters (65 feet) of vertical navigational clearance.

Alternative 1B will have an adverse effect on both the Beaufort Historic District and the Carteret County Home. This alternative also bisects the Carteret County School expansion site. Therefore, alternative 1B has been dropped from further consideration.

2. Alternative 1C

Alternative 1C was an initial alternative for improving existing roads. This alternative consisted of widening and connecting portions of West Beaufort Road and Live Oak Street and involved some new location. Alternative 1C would place a major highway on a residential street with a 35 mph speed limit. This would be disruptive to residents along West Beaufort Road and to businesses near NC 101 and US 70. For these reasons, this alternative was eliminated from further consideration.

3. Alternative 1D

Alternative 1D is the same as Alternative 1E from Radio Island to NC 101 and the same as Alternative 2D to Shell Landing Road (SR 1301).

Alternative 1D will have an adverse effect on both the Beaufort Historic District and the Carteret County Home. This alternative was removed from consideration because of the high impacts to relocatees.

4. Alternative 2B

Alternative 2B is the same as Alternative 2A from Radio Island to east of NC 101 and the same as Alternative 1B for the remainder of the project.

This alternative crosses the southern corner of the N.C. Maritime Museum Property and bisects the Carteret County School expansion site. Therefore alternative 2B was dropped from consideration.

5. Alternative 2C

Alternative 2C was also an initial alternative for improving existing roads. This alternative was eliminated from further consideration due to the same reasons as Alternative 1C.

6. Alternative 3A

Alternative 3A replaces the drawbridge with a four lane high-rise or mid-rise drawbridge adjacent to the existing structure. This alternative widens Cedar Street and Live Oak Street to five lanes from east of Gallants Channel to north of Shell Landing Road. Alternative 3A will have an adverse effect on the Beaufort Historic District. This alternative requires land from contributing properties within the Beaufort Historic District, a Section 4(f) resource. For these reasons, this alternative was eliminated from further consideration.

7. Alternative 3B

Alternative 3B was an initial alternative for improving existing roads near the downtown area. This alternative consisted of converting Cedar Street and Pine Street to one-way pairs. Alternative 3B would require construction on new location within the Beaufort Historic District and disrupt businesses along the shoreline of Gallants Channel. This alternative would also place one-way, US 70 traffic onto Pine Street, within a residential community. For these reasons, this alternative was eliminated from further consideration.

8. Queen Street Connector

The Queen Street Connector was introduced to maintain access between the new location alternatives and Cedar Street. This connector would avoid the Beaufort Historic District but place a three-lane or four-lane facility along this narrow residential street. The Queen Street Connector involved substantial community impacts and disrupted a school maintenance facility. Many area residents expressed strong opposition to this connector. For these reasons, the Queen Street Connector was eliminated from further consideration.

9. Pollock Street Connector

The Pollock Street Connector was introduced to maintain access between the new location alternatives and Cedar Street. This connector would avoid the Beaufort Historic District but place a three-lane or four-lane facility along this residential street. The Pollock Street Connector involved substantial community impacts and disrupted a school maintenance facility. Many area residents expressed strong opposition to this connector. For these reasons, the Pollock Street Connector was eliminated from further consideration.

10. Turner Street Connector

The Turner Street Connector was introduced to maintain access between the new location alternatives and Cedar Street. This connector would upgrade Turner Street to a

three-lane or four-lane facility with some new location. The Turner Street Connector would widen a portion of Turner Street within the Beaufort Historic District and relocate several residences. This connector did not provide a desirable angle at the intersection with Alternatives 1A and 1E. For these reasons, the Turner Street Connector was eliminated from further consideration.

11. Maintaining Existing Drawbridge with Alternatives 2A, 2D, and 2E

An alternative was considered for retaining the existing drawbridge and constructing a two-lane or four-lane facility along Alternatives 2A, 2D, and 2E. This concept was introduced to allow Cedar Street to remain as a US 70 business route. This would require constructing a "fly-over" interchange west of Gallants Channel, rehabilitating and maintaining the drawbridge for a 25-year period, and constructing a two-lane high-rise bridge and roadway on the Alternative 2A, 2D, and 2E routes.

With a new two-lane facility, this concept would cost \$5,800,000 more than the current costs for Alternatives 2A, 2D, and 2E. By the year 2025, this two-lane facility would operate at LOS F under heavily congested conditions that would exceed the road's capacity. With a new four-lane facility, this concept would cost \$13,100,000 more than the current costs for Alternatives 2A, 2D, and 2E. Congestion on the new facility would likely be worsened during drawbridge openings if back-ups extended into the new US 70 facility from Cedar Street. The interagency project team reviewed this concept in March 1999 and eliminated it because it did not meet the purpose and need of the project. For these reasons, this concept for maintaining the existing drawbridge was eliminated from further consideration.

12. Tunnel with Alternatives 2A, 2D, and 2E

An alternative was considered for constructing a two-lane or four-lane tunnel along Alternatives 2A, 2D, and 2E. The two-lane tunnel would allow the existing drawbridge to remain in place to serve as a US 70 business route. The tunnel concept was introduced to reduce the project's visual impacts to the Beaufort area. A 0.8 mile long tunnel was considered for the Alternative 2 alignments. This concept is estimated to cost between \$ 172,900,000 (two-lanes) and \$ 259,500,000 (four-lanes). The following additional items were needed for a tunnel alternative but were not reflected in the cost estimates:

- The remaining 2.5 miles of roadway for the Alternative 2 alignments.
- Additional bridges at the tunnel entrances to elevate the road above storm surge levels.
- An interchange with the two lane tunnel to connect the tunnel with Cedar Street.
- Excavated material from the channel may contain hazardous materials requiring special disposal measures.
- Long-term maintenance and operating costs.

For these reasons, the tunnel concept exceeded the scope of reasonable and practical

alternatives and was eliminated from further consideration.

C. "Do Nothing" Alternative

The "do nothing" alternative was considered during project development. The "do nothing" alternative presents negative impacts to future traffic operations in the area. Existing US 70 reduces to two-lanes at the drawbridge approaches. This segment of US 70 has currently reached its traffic carrying capacity. The 44-year old bridge has a sufficiency rating of 45.9 out of a possible 100 score and needs to be replaced. In addition, the drawbridge opens as many as three times an hour during daytime and evening hours, delaying motors a minimum of four minutes each opening. Reduced vehicle delays and greater traffic carrying capacity are needed along this facility. For these reasons, the "do nothing" alternative was rejected.

D. Transportation System Management Alternative

Consideration was also given for a Transportation System Management (TSM) Alternative to convert US 70 to a one way pair using Cedar and Pine Streets. This TSM Alternative would require the construction of dual two-lane high-rise bridges over Gallants Channel, involving some new location. The one way pair concept would adequately accommodate current and future year traffic. Pine and Cedar Streets would operate at LOS A in the current year and LOS C in the year 2025. Live Oak Street would operate at LOS A in the current year and the year 2025. However, routing one-way US 70 traffic onto Pine Street would be very disruptive to this residential street. As previously discussed with Alternative 3B, this concept would require construction on new location within the Beaufort Historic District and disrupt businesses along the shoreline of Gallants Channel. For these reasons, this alternative was also rejected.

E. Capacity Analysis

1. Mainline Analysis

A capacity analysis was performed to evaluate the no-build and construction alternatives. The project was divided into the following six sections for evaluating the levels of service for through traffic on US 70:

- Section 1 – Pivers Island Road (SR 1208) to Turner Street (SR 1174) (New Location)
- Section 2 – Turner Street to NC 101 (New Location)
- Section 3 – NC 101 to Shell Landing Road (SR 1301) (New Location)
- Section 4 – US 70 from Pivers Island Road to Live Oak Street
- Section 5 – US 70 from Cedar Street to NC 101
- Section 6 – Turner Street from Cedar Street to West Beaufort Road (SR 1170)

A summary of the results of the mainline analysis is provided below in Table 6.

Table 6
Mainline Levels of Service

Section Description	No Build 2025 Traffic	Alts. 1A and 1E 2025 Traffic	Alts. 2A, 2D, and 2E 2025 Traffic
1. Pivers Island Rd (SR 1208) to Turner St	-	C	C
2. Turner St to NC 101	-	C	C
3. NC 101 to Shell Landing Rd (SR 1301)	E	B	B
4. Cedar St, from Pivers Island Rd to Live Oak St	D	A	A
5. Live Oak St from Cedar St to NC 101	D	A	A
6. Turner Street from Cedar St to W. Beaufort Rd	-	E	E

Intersection Analysis

An analysis was performed at the five major intersections along the project. The analysis assumes these intersections would be signalized by the design year. The proposed operational characteristics of these intersections are described in Table 7.

Table 7
Intersection Levels of Service

Intersection	Alts. 1A and 1E 2025 Traffic	Alts. 2A, 2D, and 2E 2025 Traffic
1. Turner St/ West Beaufort Rd	F	C
2. Cedar St/ Turner St	D	D
3. Live Oak St/ Cedar St	B	B
4. NC 101(New intersection)	D	D
5. Live Oak Street/ NC 101	B	B

Turner Street/ West Beaufort Road

With Alternatives 1A and 1E, a traffic signal is proposed at this intersection. The intersection would operate at LOS D in the current year and LOS F in the year 2025 with the proposed lane configurations shown in Appendix A, Figure 7A. Along eastbound US 70, this configuration includes two left-turn lanes, two through lanes and an exclusive right-turn lane. Along westbound US 70, the intersection includes a left-turn lane, two through lanes, and two right-turn lanes. Along southbound Turner Street/ West Beaufort Road, the intersection includes two left turns, a through lane, and two right turns. Along northbound West Beaufort Road, the intersection includes a left-turn lane and a shared through and right-turn lane.

With Alternatives 2A, 2D, and 2E, a traffic signal is proposed at this "T" intersection. The intersection would operate at LOS B in the current year and LOS C in the year 2025 with the proposed lane configurations shown in Appendix A, Figure 7B. Along eastbound US 70, this configuration includes two through lanes and a right turn lane. Along westbound US 70, the intersection includes two turn lanes and two through lanes. Along northbound Turner Street, the intersection includes two left-turn lanes and a right-turn lane.

Cedar Street/ Turner Street

With Alternatives 1A and 1E and 2A, 2D, and 2E, the existing traffic signal would be retained. The intersection would operate at LOS C in the current year and LOS D in the year 2025 with the proposed lane configurations shown in Appendix A, Figure 7C. This configuration includes an exclusive left-turn lane and a shared through and right-turn lane on each approach.

Live Oak Street/ Cedar Street

With Alternatives 1A and 1E and 2A, 2D, and 2E, the existing traffic signal would be retained. The intersection would operate at LOS A in the current year and LOS B in the year 2025 with the current lane configurations shown in Appendix A, Figure 7E.

NC 101

With Alternatives 1A and 1E and 2A, 2D, and 2E, a traffic signal is proposed at this new intersection. The intersection would operate at LOS C in the current year and LOS D in the year 2025 with the proposed lane configurations shown in Appendix A, Figure 7G. Along eastbound US 70, this configuration includes two left-turn lanes, a through lane, and a shared through and right-turn lane. Along westbound US 70, the intersection includes a left-turn lane, two through lanes, and a right-turn lane. Along northbound NC 101, the intersection includes a left-turn lane and a shared through and right-turn lane. Along southbound NC 101, the intersection includes a left-turn lane, a through lane, and two right-turn lanes.

Live Oak Street/ NC 101

With Alternatives 1A and 1E and 2A, 2D, and 2E, the existing "T" intersection with Live Oak Street and NC 101 would operate at LOS B in the current year and LOS B in the year 2025 with the existing lane configurations shown in Figure 7H.

F. Recommendation

No alternative is recommended at this time. All five remaining "construction" alternatives will be shown to the general public at the public hearing. A decision will be made after the hearing.

V. RECOMMENDED IMPROVEMENTS

A. Cross Sections

1. Proposed Bridge

The proposed bridge typical section provides a 19.2-meter (63-foot), four-lane divided roadway with 3.6-meter (12-foot) inside travel lanes, 4.2-meter (14-foot) outside travel lanes, a minimum 1.2-meter (4-foot) median barrier, and 1.2-meter (4-foot) offsets (see Appendix A, Figure 9A).

2. Alternatives 1A, 1E, 2A, 2D and 2E

The proposed typical section for Alternatives 1A, 1E, 2A, 2D and 2E provide a 20.1-meter (66-foot), four-lane divided parkway facility throughout the entire length of the project. This typical section includes 3.6-meter (12-foot) travel lanes, a 5.7-meter (19-foot) raised grass median, and 1.2-meter (4-foot) paved outside shoulders.

The proposed connector using existing Turner Street or Turner/ West Beaufort Road includes a 12-meter (40-foot), three-lane curb and gutter section from Cedar Street to north of Pine Street, within the historic district. The typical section includes two 3.6-meter (12-foot) travel lanes, a 3.6-meter (12-foot) center turn lane, and 3-meter (10-foot) berms with sidewalks. Outside of the historic district, a 10.8-meter (36-foot), three-lane shoulder section is proposed from north of Pine Street to the intersection with Alternatives 1A, 1E, 2A, 2D and 2E. This typical section includes two 3.6-meter (12-foot) travel lanes, a 3.6-meter (12-foot) center turn lane, and 1.2-meter (4-foot) paved shoulders.

B. Right of Way and Access Control

For Alternatives 1A, 1D, 2A, 2D and 2E, the proposed right of way for the shoulder section varies from 39 to 60 meters (130 to 200 feet). Partial control of access is proposed along the new location portions of these alternatives. This is defined as full control except at intersections and designated access points. The proposed right of way for the curb and gutter section is 29 meters (95 feet). Temporary construction easements are needed along the curb and gutter section.

The right of way width for the proposed connector along Turner Street or Turner/ West Beaufort Road is 20 meters (66 feet) within the historic district from Cedar Street to north of Pine Street. The right of way varies from 30 meters (98-feet) north of Pine Street to 50 meters (164 feet) near Alternatives 1A-1E and 2A-2E. No control of access is proposed for either connector.

C. Design Speed

The project will be designed to meet a design speed range of 80 km/h (50 mph) to 100 km/h (60 mph). Design speed is a correlation of the physical features of a highway, which influence vehicle operation and reflect the degree of safety and mobility desired along a highway. Design speed is not to be interpreted as the recommended or posted speed.

D. Intersecting Roadways and Type of Control

All intersecting roads will remain at grade, except for Alternatives 1A and 1E, where a grade separation is proposed for Turner Street. Traffic signals are proposed at the intersections with Turner Street (SR 1174) and/or West Beaufort Road (SR 1170), NC 101, and US 70 (Live Oak Street).

The existing stop sign and traffic signal control will be maintained at the remaining intersections.

E. Structures and Drainage Recommendations

Bridges are proposed for US 70 at Gallants Channel and along Turner Street at Town Creek. Alternatives 1A and 1E include a four-lane, 1460-meter (4790-foot) bridge crossing Gallants Channel. Alternatives 2A, 2D and 2E include a four-lane, 1025-meter (3360-foot) bridge crossing Gallants Channel.

The Turner Street bridge over Town Creek is proposed as a three-lane, 13.6-meter by 110-meter (45-foot by 360-foot) bridge.

Alternatives 1A and 1E include a bridge with a 19.81-meter (65-foot) clearance height to allow accessibility to the Harbor of Refuge through Gallant's Channel. The Harbor of Refuge is a safe haven for vessels during the time of emergency or unsafe conditions. Alternatives 2A, 2D, and 2E can potentially provide a 13.6-meter (45-foot) bridge without hindering the accessibility to the Harbor of Refuge because of the location of these alternative's crossing location of Gallant's Channel. A 19.81-meter (65-foot) bridge would allow taller boats to access points to the north of the project location. Bridges that would impede the navigation of boats because of inadequate clearance height will need to function as a draw or movable span bridge to allow passage through the channel. The cost of a drawbridge option with any of the five alternatives would add twenty million dollars (\$20,000,000) to the construction cost of this project.

F. Bicycle and Pedestrian Accommodations

This segment of US 70 is listed in the Incidental Bicycle and Pedestrian Needs section of the 2004 – 2010 TIP. This means that bicycle and pedestrian accommodations should be considered for inclusion in the roadway improvement project. The proposed facility includes shared bicycle accommodations along US 70. AASHTO's standard 1.2-meter (4-foot) paved shoulders are proposed for Alternatives 1A-1E and 2A-2E. The proposed Gallants Channel Bridge includes 1.2-meter (4-foot) offsets and 1372-millimeter (54-inch) bicycle safe railings.

With all five Alternatives, existing sidewalks will be replaced along both sides of Turner Street from Cedar Street to north of Pine Street.

No new sidewalk is recommended at this time.

VI. SOCIAL, ECONOMIC AND ENVIRONMENTAL EFFECTS

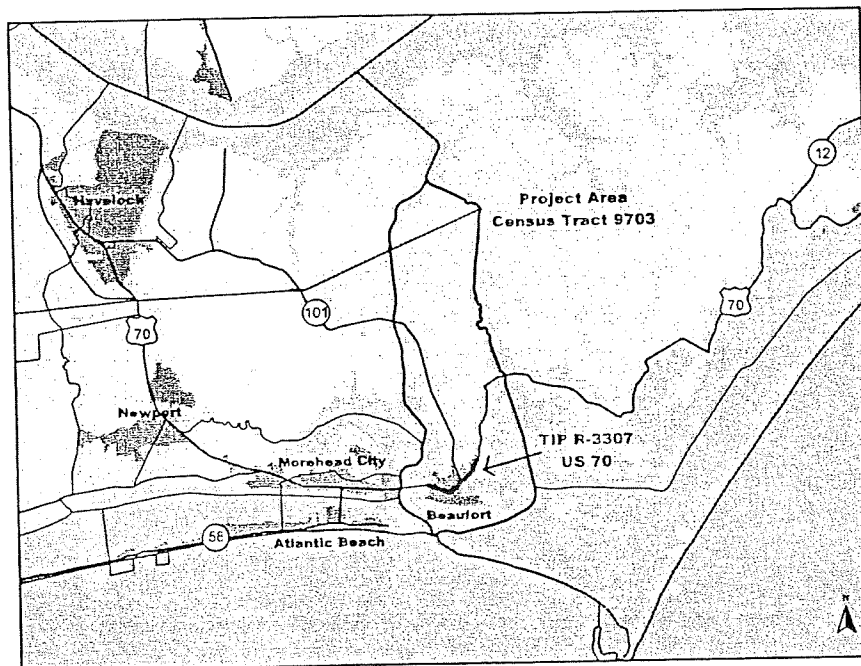
Table 5 shows a summary of environmental effects associated with each of the five remaining alternatives.

A. Social Effects

1. Geographic and Political Location

Carteret County is located on North Carolina's Atlantic coast near the Pamlico Sound. It is bordered by Onslow, Jones, Craven and Pamlico Counties, and is part of the Region P Neuse River Council of Governments. For the purposes of demographic data collection, the project area has been defined as Census Tract 9703.

Figure A. Study Area



Source: US Census Bureau, 2000

The project area is shown in Figure A. The arrow designates the area within the outline that distinguishes the project area within the boundaries of Census Tract 9703. The northernmost boundaries of this Census Tract were modified between 1990 and 2000 and therefore, direct correlation between 1990 and 2000 data cannot be assumed. However, a great majority of the residents reside in the southern portion of Census Tract 9703, which is that area in and around Beaufort. Since the boundary changes were so minor and population so sparse in the northern part of the Census Tract, the general demographic representation of the project area should be minimally impacted.

2. Population, Race, Ethnicity and Age

According to the 2000 Census, the total population of Carteret County was 59,383. This indicates that the population increased by 6,827 or 13.0% since 1990. The project area grew less substantially than the County, with a growth rate of only 1.5%. Neither the project area nor the County grew as appreciably as the State, which had an average rate of growth of 21.4%.

Table 8
Population Growth, 1990-2000

Area	Population		Change, 1990-2000	
	1990	2000	#	%
Project Area	7,552	7,665	113	1.5%
Carteret County	52,556	59,383	6,827	13.0%
North Carolina	6,628,637	8,049,313	1,420,676	21.4%

Source: US Census Bureau, 1990 & 2000

Note: Project Area is Census Tract 9703

In 2000, the Census Bureau reported that both the project area and Carteret County had a lower percentage of non-Whites (22.6% and 10.7% respectively) than the State (29.8%). This was also the case in 1990, as the percentage of non-Whites in the State appeared to be higher than the percentage in the project area and county. The percentage of African Americans in the project area and County decreased between 1990 and 2000. On the other hand, the percentage of Hispanics in the project area and County increased slightly in the same time frame. While it is possible to compare general trends in race distribution (between 1990 and 2000), it is difficult to compare exact percentages. The Census Bureau did not consider Hispanic or Latino as a separate race category in 1990, while it did create a separate category in 2000.

In addition, the 2000 Census data indicated that the project area and County had lower percentages of African Americans than the State. The percentage of African Americans in Census Tract 9703 was 18.6%, however, the African American population in this Tract made up almost 35% of African Americans in Carteret County. Furthermore, the project area constituted less than 10.0% of the total land area in the County. This information suggests that, despite the fact that the project area was home to a lesser percentage of African Americans than the North Carolina average, a large portion of Carteret County's African American population is concentrated in Census Tract 9703 near the proposed transportation improvements.

Table 9
Population by Race, 2000

Race	Project Area		Carteret County		North Carolina	
	Population	%	Population	%	Population	%
White	5,934	77.4%	53,041	89.3%	5,647,155	70.2%
Black or African American	1,427	18.6%	4,121	6.9%	1,723,301	21.4%
American Indian or Alaska Native	22	0.3%	251	0.4%	95,333	1.2%
Asian	22	0.3%	307	0.5%	112,416	1.4%
Native Hawaiian and Pacific Islander	0	0.0%	33	0.1%	3,165	0.0%
Hispanic or Latino	182	2.4%	1,035	1.7%	378,963	4.7%
Other Race	16	0.2%	37	0.1%	9,015	0.1%
Two or More Races	62	0.8%	558	0.9%	79,965	1.0%
Total	7,665	100.0%	59,383	100.0%	8,049,313	100.0%

Source: US Census Bureau, 2000

Note: Project Area is Census Tract 9703

3. Income, Poverty Status and Unemployment

Carteret County's median household income has been consistently lower than the average median household income for North Carolina. The most recent estimate (1997) showed that the County had a median household income of about \$34,345, while the State average median was almost \$1,000 more. Between 1990 and 1997, median household income increased by 33.1% in Carteret County and 32.5% in North Carolina.

Table 10
Median Household Income, 1990-1997

Area	Median Household Income		Change, 1990-1997	
	1990	1997	#	%
Carteret County	\$25,811	\$34,348	\$8,537	33.1%
North Carolina	\$26,647	\$35,320	\$8,673	32.5%

Source: US Census Bureau

Note: 1997 figures are model-based estimates

The percentage of County residents living below the poverty level was somewhat less than the percentage of North Carolina residents living in poverty. Between 1990 and 1997, the percentage of persons living below the poverty level increased by 0.2% in the County, yet decreased by 0.4% in the State.

Table 11
Population Below Poverty Level, 1990-1997

Area	% Below Poverty		Change, 1990-1997
	1990	1997	#
Project Area	13.3%	N/A	N/A
Carteret County	11.6%	11.8%	0.2%
North Carolina	13.0%	12.6%	-0.4%

Source: US Census Bureau

Note: 1997 figures are model-based estimates

The North Carolina Employment Security Commission provides unemployment figures for the entire state and all counties individually. Over the past decade, Carteret County experienced higher unemployment rates than the State. While unemployment rates improved in the State between 1990 and 2000, the unemployment rate of Carteret County increased slightly.

Table 12
Unemployment Rates, 1990-2000

Area	Unemployment Rate		Change, 1990-2000
	1990	2000	#
Carteret County	4.3%	4.4%	0.1%
North Carolina	4.2%	3.6%	-0.6%

Source: North Carolina Employment Security Commission

4. Housing Characteristics

The homeownership rates for the project area (70.2%) and North Carolina (69.4%) were very comparable in 2000, whereas the homeownership rate for Carteret County was substantially higher (76.6%). The project area, the County and the State each experienced positive growth in homeownership rates between 1990 and 2000.

Likewise, the 1990 median home value in the County was higher than in both the project area and the State. This does not hold true for the 1990 median contract rents. Both the project area and County had lower contract rents than the North Carolina median. The Census Bureau has not yet released information on median home values and median contract rents for the year 2000.

Table 13
Housing Characteristics

Area	Homeownership Rate		Median Home Value	Median Contract Rent
	1990	2000	1990	1990
Project Area	68.9%	70.2%	\$66,200	\$258
Carteret County	74.2%	76.6%	\$73,100	\$280
North Carolina	68.0%	69.4%	\$65,800	\$284

Source: US Census Bureau, 1990 & 2000

5. Public Facilities, Schools, and Institutions

The Carteret County courthouse and Sheriff's Department are located on US 70 between Turner and Queen Streets. The Beaufort Housing Authority is located on Mulberry Street between Pollock and Marsh. A US Postal Service branch is located on US 70 near Pinners Point Road (SR 1303). The Carteret County Home is located on NC 101.

The Boys and Girls Club of Carteret County is located at Queen and Mulberry, while the County School maintenance department is located directly to the north. A Head Start facility is located at Queen and Mulberry. Beaufort Elementary School is located at US 70 and Mulberry. Beaufort Middle School is located at Carraway Drive and Campen Road. There is some potential for the elementary school to be relocated to an area northwest of the middle school – approximately on the site of the existing baseball field.

Abutting US 70 in downtown Beaufort are the Mount Zion Baptist Church, St. Stephen Church and Washburn Seminary. Beaufort Original Free Will Baptist Church is located along West Beaufort Road. First Free Will Baptist Church and the associated Beaufort Christian Academy, as well as Tiller School, are located on US 70 near Pinners Point Road (SR 1303). Grace Presbyterian Church is located farther north along US 70.

6. Police, Fire, EMS, and Public Services

Carteret County EMS is located at US 70 and Turner Street. The Beaufort Fire Department is located at Cedar, Gordon and Live Oak Streets.

7. Relocation Impacts

As shown in Table 5, the project alternatives will relocate residences, businesses, and/or churches within the project area. The total number of relocations range from 21 with Alternative 2A to 64 with Alternative 1E (see Relocation Report in Appendix B). Adequate replacement housing is anticipated to be available for all relocatees at the time the residents, businesses, and non-profit institutions must relocate.

The Division of Highways offers a Relocation Assistance Program to help minimize the effects of displacement on families and businesses. The occupants of the affected residences or businesses may qualify for aid under one or more of the NCDOT relocation programs.

It is the policy of the NCDOT to ensure that comparable replacement housing will be available prior to construction of state and federally assisted projects. Furthermore, the North Carolina Board of Transportation has the following three programs to minimize the inconvenience of relocation:

- Relocation Assistance
- Relocation Moving Payments
- Relocation Replacement Housing Payments or Rent Supplement

The Relocation Assistance Program provides experienced NCDOT staff to assist displacees with information such as availability and prices of homes, apartments, or businesses for sale or rent and financing or other housing programs. The Relocation Moving Payments Program provides for payment of actual moving expenses encountered in relocation. Where displacement will force an owner or tenant to purchase or rent property of higher cost or to lose a favorable financing arrangement (in cases of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to \$22,500 to owners who are eligible and qualify and up to \$5,250 to tenants who are eligible and qualify.

The relocation program for the proposed action will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. At least one relocation officer is assigned to each highway project for this purpose.

The relocation officer will determine the needs of displaced families, individuals, businesses, non-profit organizations, and farm operations for relocation advisory services without regard to race, color, religion, sex, or national origin. The NCDOT will schedule its work to allow ample time prior to displacement for negotiations and possession of replacement housing that meets decent, safe, and sanitary standards. The displacees are given at least a 90-day written notice after NCDOT purchases the property. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within financial means of the families and individuals displaced, and will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant housing to another site (if possible). The relocation officer will also supply information concerning other state or federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations, and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments, and incidental purchase expenses may not exceed \$22,500 (combined total), except under the Last Resort Housing provision.

A displaced tenant may be eligible to receive a payment, not to exceed \$5,250, to rent a replacement dwelling or to make a down payment, including incidental expenses, on the purchase of a replacement dwelling. The down payment is based upon what the state determines is required when the rent supplement exceeds \$5,250.

It is the policy of the state that no person will be displaced by the NCDOT's state or federally assisted construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time before displacement. No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law.

Last Resort Housing is a program used when comparable replacement housing is not available, or when it is unavailable within the displacee's financial means, and the replacement payment exceeds the federal/state legal limitation. The purpose of the program is to allow broad latitudes in methods of implementation by the state so that decent, safe, and sanitary replacement housing can be provided. Last Resort Housing may be used if necessary.

8. Community Stability and Neighborhood Cohesion

Potential impacts are assessed by project segment. However, it must be noted that for traditional, close-knit and walkable neighborhoods, road construction can have potentially serious and substantial effects on local cultural norms, community stability and social cohesion.

Alternatives 1A and 1E appear likely to form a barrier between eastern and western West Beaufort Road, with the western portion becoming an isolated fragment. The area between these alternatives and the airport could anticipate experiencing substantial disinvestment for residential purposes.

Alternatives 2A, 2D and 2E should have only minor impacts on an area already affected by the airport. The county and airport already hope to relocate private hangers that would be displaced.

Alternatives 1A, 1E, 2A, 2D and 2E may cause some minor disruption of residential areas where they intersect the NC 101 corridor; however, local plans indicate a potential change of use to a commercial node in this area. These alternatives may increase the stability of neighborhoods that currently are accessible directly from existing US 70

Alternatives 1A, 2A, and 2D should not affect stability or cohesion of any existing developments.

9. Title VI of the Civil Rights Act of 1964 and Environmental Justice

Title VI of the Civil Rights Act of 1964, and related statutes, requires there be no discrimination in Federally-assisted programs on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," provides that "each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations." The Executive Order makes clear that its provisions apply fully to American Indian populations and Indian tribes. Environmental justice refers to the equitable treatment of people of all races, cultures, and income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

Alternatives 1A and 1E are anticipated to have substantial visual, noise, relocation, stability and cohesion impacts on a mobile home park located east of the proposed bridge. While other areas would be expected to experience some of these impacts, no other area would be affected to this extent. These impacts appear to affect low-income households in this mobile home park. Alternatives 2A, 2D, and 2E will avoid the area.

This project is being implemented in accordance with Executive Order 12898.

10. Cultural Resources

This project is subject to compliance with Section 106 of the National Historic

Preservation Act. Section 106 requires that if a federally-funded, licensed, or permitted project has an effect on a property listed on or eligible for the National Register of Historic Places, the Advisory Council on Historic Preservation must be given an opportunity to comment.

a. Historic Architectural Resources

The State Historic Preservation Office (SHPO) requested a historic architectural evaluation of the project area, including the Washburn Seminary Trade Training Workshop and African American Resources for National Register eligibility. These resources as well as properties over 50 years of age within the area of potential effect (APE) of the project were evaluated by NCDOT staff architectural historians.

NCDOT's survey methodology consisted of field surveys and background research on the project area. Two staff historians conducted field surveys in April and May of 1999 and November 2000 by car and on foot. Background research was conducted at the North Carolina State Library, the Bridge Maintenance Records at NCDOT, and the files and maps at the State Historic Preservation Office. Historic resources are described in detail in the Historic Architecture Report, included in the project files of NCDOT's Project Development and Environmental Analysis Branch.

The Beaufort Historic District and the Carteret County Home are currently listed on the National Register of Historic Places. In addition, NCDOT and FHWA have determined that the following properties are eligible for listing on the National Register:

- Washburn Seminary Trade Training Workshop
- J.C. Stanley Grocery
- Scotts Grocery
- Beaufort Graded School (Present Beaufort Elementary School)
- Ward-Hancock House
- Bridge No. 29 at US 70 over Gallant's Channel

The SHPO concurs with these determinations (see correspondence in Appendix C).

Alternatives 1A and 1E will have an adverse effect on the Beaufort Historic District and on the Carteret County Home. Alternatives 2A, 2D, and 2E will have no adverse effect on the Historic District but will have an adverse effect on the Carteret County Home. The project alternatives will have no effect on J. C. Stanley Grocery, Scotts Grocery, and the Ward-Hancock House. The project alternatives will have no effect on the drawbridge over Gallant's Channel if the bridge remains in place. If the bridge were to be removed, it would be considered an adverse effect. Mitigation efforts would be analyzed to place the bridge in another location. A memorandum of agreement for any adverse effects will be prepared after a preferred alternative is selected.

b. Archaeological Resources

There are no known archaeological sites within the project area. Based upon knowledge of the area, it is unlikely that any archaeological resources eligible for inclusion in the National Register of Historic Places will be affected by the proposed construction. For this reason, the SHPO recommended that no archaeological investigation be conducted for the project (refer to correspondence in Appendix C).

c. Section 4(f) Resources

Section 4(f) of the DOT Act of 1966 protects the use and function of publicly owned parks, recreation areas, wildlife/waterfowl refuges, and historic properties. A transportation project can only use land from a 4(f) resource when there are no other feasible or prudent alternatives and when the project includes all possible planning to minimize harm to the resource.

The historic architectural resources described in Section VI.A.10.a are considered to be Section 4(f) resources. Currently, there are no impacts to 4(f) resources.

B. Economic Effects

1. Business Activity/ Employment Centers

Many of the local business activities are located in Beaufort's historic downtown area between US 70 and the waterfront. Businesses are also located along US 70 between Cedar Street and First Street. Several marinas and boat dock facilities are located within the harbor beside Gallants Channel. A commercial center is located along US 70 East opposite Pinners Point Road (SR 1303) with a supermarket, fast food restaurants, hardware, retail operations, and a fitness center.

2. Economic Development Opportunities

History-based tourism is one of the main attractions for Beaufort. Tourist-oriented businesses depend on maintaining the integrity of the historic fabric of the town. This includes both its historic architecture as well as its walkable street pattern. Removal of high traffic volumes from the historic area with Alternatives 1A, 1E, 2A, 2D, and 2E should enhance economic development opportunities with Beaufort's community core. Conversely, increased traffic volumes on Cedar and Live Oak Streets with Alternative 3A would mostly likely have substantial negative effects on community character as well as interfere with both pedestrian and vehicular access to cross streets.

Town officials noted that an intersection of Alternatives 1A, 1E, 2A, 2D, and 2E with existing US 101 would be an area, which would encourage nodal commercial development. The selection of Alternatives 1A, 2A, and 2D should enhance opportunities for additional residential development.

3. Regional Development Goals and Plans

The project should have no direct effects on airport expansion plans. The Beaufort – Morehead City Airport currently proposes to extend Runway 26, located just north of the project area. Other than reducing commuting times for some workers, the project should have no effects on county plans for Jarrett Bay Marine Industrial Park on NC 101. It is unclear whether the project would have any positive or negative effects on possible development of the Open Grounds Farm tract.

Alternatives 1E and 2E seriously interfere with the proposed school expansion site north of the middle school. Alternatives 1A, 2A, and 2D have a minor effect on the school expansion.

Alternatives 2A, 2D, and 2E cross the southern corner of the proposed Maritime Museum site, affecting 4.6 acres of land from the 36-acre site. These Alternatives should improve the visibility and accessibility of this site to tourists, if it is developed in the future as part of the museum system. Although the site overlooks modern development as well as a commercial fishing fleet and is located between airport runways, some museum proponents have voiced concerns that a new bridge and nearby road noise may detract from a “recreated village experience.” The selection of Alternatives 2A, 2D, 2E may require the development plans for Maritime Museum to be reworked.

4. Tax Base Changes/ Changes in Employment

Potential impacts are assessed by segment. For a small, historic town dependent on tourism, road construction can potentially have serious and substantial effects on property and sales taxes as well as on lodging, restaurants and other visitor-oriented businesses and services.

Alternatives 2A, 2D, and 2E may have minor impacts on property values.

Alternatives 1A, 2A, and 2D may have minor negative impacts to none on property values. These alternatives may accelerate residential development conceptually planned for this area.

Alternatives 1E and 2E have the potential to enhance additional development within the US 70 East commercial area.

C. Land Use

1. Existing/ Future Land Uses and Present/ Future Zoning

All the alternatives are within the municipal boundaries of Beaufort or within the town’s Extraterritorial Planning Jurisdiction. Virtually all of the developable areas within

the town area have already been developed. Existing land uses associated with Alternatives 1A, 1E, 2A, 2D, and 2E are private commercial facilities adjoining the airport, single family residences, churches, schools, farmland, and businesses.

All areas in the project vicinity are zoned either for business or residential development. Residential zoning inside town limits permits one residence per 8,000 square feet while zoning outside town limits allows one residence per 20,000 square feet.

2. Local/ Regional Land Use and/or Development Plans

Town and county planners as well as economic development specialists indicated that open lands and farming operations are being developed for residential purposes. Some of this development is due to second home and retiree markets but much is also due to the demands of a growing population.

The county proposes to expand the airport's northernmost runway, Runway 26. Such expansion may cause noise concerns for any proposed developments along Alternatives 1A, 2A, and 2D.

The Campen farm area, along the south side of Alternative 1A, has been rezoned for residential development and has been sold. At present no development plans have been submitted for approval by the town, but all indications are that this area will be subdivided and developed.

Creation of a commercial node at the intersection of NC 101 with Alternatives 1A, 1E, 2A, 2D, and 2E is considered a worthwhile goal by town and county staff.

As previously noted in this document, Beaufort Elementary School may be relocated to a site beside the Beaufort Middle School. School officials have commented that Alternatives 1A, 1E, 2A, and 2E would negatively impact this proposed Elementary School location.

The Friends of the Maritime Museum are in the planning process for developing a maritime village or open air museum site on a parcel at the western end of West Beaufort Road (SR 1170). Alternatives 2A, 2D and 2E may affect the plan.

Outside the project area about six miles to the north along US 101 and the Intracoastal Waterway is the 146 acre Jarrett Bay Marine Industrial Park. The park contains several industrial and heavy commercial uses. Beaufort has extended water and sewer lines along NC 101 to the park.

Open Grounds Farms, also outside of the project area along US 70, is a possible candidate for industrial or commercial development. At present its primary attraction is being a large parcel without wetlands.

3. Farmland

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the impact of land acquisition and construction projects on prime and important farmland soils. North Carolina Executive Order Number 96, Prèservation of Prime Agricultural and Forest Lands, requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the U.S. Natural Resources Conservation Service (NRCS). These soils are determined by the SCS based on criteria such as crop yield and level of input of economic resources. Land that is planned or zoned for urban development is not subject to the same level of preservation afforded other rural, agricultural areas.

All lands currently farmed within the project area are zoned for residential use and are planned for urban and suburban development. Farmland mitigation or avoidance appears not to be necessary.

4. Secondary/ Cumulative Impacts

Secondary effects are indirect impacts that are caused by or result from the project but are still reasonably foreseeable though these are later in time or further removed in distance. Cumulative effects are the results of the incremental impacts of the project when added to other past, present and reasonably foreseeable future activities regardless of which entities undertake these other activities. Cumulative effects can result from individually minor but collectively substantial activities taking place over a period of time.

One unintended consequence of roadway improvements can be --depending upon local land development regulations, development demand, water/sewer availability, and other factors -- encouragement of additional development and sprawl. Improvements to levels of service, better accommodation of merging and exiting traffic, and reductions in travel times can have land development impacts outside of the project area.

Due to noise, visual impacts, and a barrier effect, Alternatives 1A and 1E have some potential to cause disinvestment and decline in several blocks along Cedar Street from Turner Street to Gallants Channel. In addition, much of the area between this new route and the airport can be anticipated to undergo substantial changes in land use and development patterns. While the exact nature of such changes would depend on local government actions, the area would generally be suited for highway commercial type development. Such development would conflict with current local land use plans, could interfere with mobility gains, and may not provide a suitable gateway for tourists visiting a historic town. Substantial changes in use in this area could also impact development plans for the Maritime Museum.

Alternatives 2A, 2D and 2E also have some potential for highway-oriented development along the south side. However, these alternatives may also result in

reinvestment and improvements in this area since the proposed roadway appears more likely to act as a buffer rather than a barrier. While some direct impacts to the Maritime Museum site may be negative, the long-term effects of improved visibility and accessibility may be quite positive.

Alternatives 1A, 1E, 2A, 2D, and 2E appear likely to encourage the development of a commercial node at the intersection with NC 101. If sufficient market share exists, Alternatives 1E and 2E should permit this new nodal development to coexist with the existing US 70 East development. Regardless of market share, Alternatives 1A, 2A, and 2D could put the US 70 East development at a competitive disadvantage by reducing its visibility and accessibility. Alternatives 1A, 2A, and 2D also appear more likely to result in suburban development patterns while Alternatives 1E and 2E may encourage infill development.

Regardless of which alternative is selected, expanding the capacity of US 70 and replacing the drawbridge with a high rise span can be expected to support existing development in Beaufort and growth along NC 101. The primary impacts will be within the coastal corridor east of Beaufort.

Expanded capacity and enhanced mobility along coastal US 70 may benefit many aspects of the area's tourism industry. This focus on mobility and coastal tourism can also have some negative effects on accessibility, industrial development and residential quality of life issues. If local land use and development decisions reduce levels of service, the intensification of growth within the coastal corridor may also impact hurricane evacuation.

D. Environmental Effects

1. Biotic Resources

An ecological evaluation was conducted to inventory and describe the natural resources which occur within the proposed right-of-way boundaries and which are likely to be impacted by the proposed action. Assessments of the nature and severity of probable impacts to these natural resources are provided along with measures to minimize resource impacts. Additional details regarding this ecological evaluation are contained in the Natural Resources Technical Report available from NCDOT. (See additional information in the summary).

Methodology

Research was conducted prior to field investigations. Published resource information pertaining to the project area was gathered and reviewed.

Water resource information was obtained from publications of the Department of the Environment and Natural Resources (DENR, 1993). Information concerning the -

occurrence of federal and state protected species in the study area was obtained from the US Fish and Wildlife Service (FWS) list of protected and candidate species (January 29, 2003) and from the N.C. Natural Heritage Program (NCNHP) database of rare species and unique habitats. NCNHP files were reviewed for documented occurrences of state or federally listed species and locations of significant natural areas.

General field surveys were conducted along the proposed alignment on the following dates: February 2, 1999, May 4 – May 6, 1999, September 1, 1999, and November 4, 1999. Water resources were identified and their physical characteristics were recorded. Plant communities and their associated wildlife were also identified and described. Vegetative communities were mapped using aerial photography of the project site. Wildlife identification involved using a variety of observation techniques: qualitative habitat assessment based on vegetative communities, active searching, identifying characteristic signs of wildlife (sounds, scat, tracks and burrows). cursory surveys of aquatic organisms were conducted and tactile searches for benthic organisms were administered. Organisms captured during these searches were identified and then released.

Jurisdictional wetlands, if present, were identified and evaluated based on criteria established in the "Corps of Engineers Wetland Delineation Manual" (Environment Laboratory, 1987) and "Guidance for Rating the Values of Wetlands in North Carolina" (Division of Environmental Management, 1995). Wetlands were classified based on the classification scheme of Cowardin, et al. (1979).

Terminology and Definitions

For the purposes of this document, the following terms are used concerning the limits of natural resources investigations. "**Project area**" denotes the area bounded by the proposed right-of-way limits along the full length of the project alignment. "**Project vicinity**" is defined as an area extending 1.0 km (0.6 mi.) on all sides of the project area, and "**Project region**" denotes an area equivalent in size to the area represented by a 7.5 minute USGS quadrangle map, i.e. [163.3 sq. km (63.1 sq. mi.)].

a. Biotic Communities

Biotic communities include terrestrial, estuarine, and aquatic communities. This section describes the biotic communities encountered in the project area. The composition and distribution of biotic communities throughout the project area are reflective of topography, soils, hydrology, and past and present land uses. These classifications follow Schafale and Weakley (1990) where possible.

1). Terrestrial Communities

Terrestrial Communities within the project limits to be impacted include: Disturbed/ Maintained Community, Pine Plantation-Wet Pine Flatwoods, and Salt Shrub

2). Estuarine Communities

Two Estuarine Communities, Tidal Flats and Salt Marsh, will be impacted

3). Aquatic Communities

Two aquatic community types will be impacted by the proposed project. These include the open water habitat of Gallants (Beaufort) Inlet and Town Creek.

Bridge Piling Habitat

Natural solid substrates are very limited in coastal habitats in North Carolina, and consist primarily of shell remains from living organisms (clams, oysters etc.). Bridge pilings and rock jetties provide solid substrate, which harbors a community similar in structure and composition to vertical surfaces of subtidal and intertidal rocky shores, found in New England. Predominate life forms found in this community consist of organisms that attach themselves to the available substrate. The faunal species that are attached to the substrate are typically suspension feeders filtering planktonic organisms out of the water column. Competition for space is great and crowding is a typical characteristic of the community. Numerous fish species have high affinities for hard substrates (known as thigmotropism); and thus bridge pile communities attract a large number of fish. Community structure of the piling habitat is vertically stratified and contains intertidal and subtidal components.

Species found in the intertidal zones of the pilings are exposed to air during low tide, and thus have adapted means to avoid drying out, such as gelatinous coating (algae), or the ability to close (oysters, barnacles etc.).

b. Summary Of Anticipated Impacts

Construction of the proposed project will have various impacts on the biotic resources described. Any construction related activities in or near these resources have the potential to impact biological functions. This section quantifies and qualifies potential impacts to the natural communities within the project area in terms of the area impacted and the organisms affected.

Temporary and permanent impacts are considered here as well, along with recommendations to minimize or eliminate impacts.

1). Terrestrial Impacts

Impacts to terrestrial communities will result from project construction due to the clearing and paving of portions of the project area, and thus the loss of community area. Table 14 summarizes potential losses to these communities, resulting from project construction. Calculated impacts to terrestrial communities reflect the abundance of each community present in the study area. Estimated impacts are derived based on the project lengths and the proposed right-of-way width for the various alternatives. The right of way width used for the Alternatives 1A and 1E and 2A, 2D, and 2E is 46 meters (150 feet). The right of way width for Alternative 3A is 27 meters (90 feet). However, project construction often does not require the entire right-of-way; therefore, actual impacts may be considerably less.

Table 14
Estimated Area Impacts to Terrestrial Communities

Alternative	Disturbed/ Maintained	Pine Plantation-Wet Pine Flatwoods	Salt Shrub	Total Impacts
Alt 1A	12(30)	4.1(10.1)	<.1	16(40)
Alt 1E	15(37)	1.2 (3.0)	<.1	16(40)
Alt 2A	11.8(29.8)	4.1 (10.2)	<.1	16(40)
Alt 2D	12.4(31.4)	3.5 (8.5)	<.1	16(40)
Alt 2E	14.2(35.8)	1.7 (4.2)	<.1	16(40)

Note: Impacts are given in hectares (acre)

Impacts to terrestrial communities will occur in the form of habitat reduction in the process of filling, clearing, grading and resurfacing during construction. Portions of the disturbed/maintained community will be completely destroyed during construction, but will eventually re-establish after construction has ended. This will result in a temporary loss of habitat for small animals and predators that utilize open areas. The portions of the other communities will be taken, thus reducing the total natural habitat in the project area.

Habitat fragmentation is another direct consequence of roadways. Impacts of habitat fragmentation on community structure can be dramatic. Newly constructed roadways dissect existing habitats, creating barriers to some species and the inability to cross roads by other species fragments faunal populations into smaller less stable subpopulations.

Fragmentation impacts from a single road project become magnified with increasing road density and other development in an area. Significant habitat

fragmentation and loss has occurred in the project area from urbanization. Construction of this project will further the trend towards urbanization of the project area.

Wildlife mortality caused by vehicles is a direct consequence of the highway facility once the road is in operation. Visible game species such as deer and rabbits are frequently victims of animal-vehicle accidents. Reptiles and amphibians as well as birds and small mammals are also susceptible to roadkill. Highway related mortality to these animals is less visible to the public, and historically has gone unreported and unresearched.

The data in Table 15 predicts only the direct taking of land and community types during highway construction. There may be a number of indirect effects that could occur. This damage could potentially include:

- Soil compaction and root exposure and injury
- Placing fill dirt over tree roots
- Spillage of harmful substances
- Skinning of trees by machinery

Precautions need to be taken in order to avoid these potential impacts.

2). Estuarine and Aquatic Impacts

The proposed bridge replacement section of the project will not significantly alter habitat conditions in the project area. Long-term impacts to the communities described are expected to be minimal. The existing bridge piles will be removed, and thus the organisms attached to them. However, the piles of the newly constructed bridge will be rapidly colonized with the same species. (It is likely that the community assemblage described above will be established on the newly constructed piers before the demolition of the existing bridge takes place).

Precautions will be taken to keep sediment, re-suspended substrate, and construction debris (wet concrete, etc.) from leaving the construction site and impacting areas of Beaufort Inlet outside of the project area. Although these habitats are sedimentary in nature, particular organisms are sensitive to significant pulses of sediment that occurs with bridge construction activity. Impacts to the aquatic community will result from the demolition of the existing bridge and replacement of the Gallants Channel Bridge. Impacts are likely to result from the physical disturbance of aquatic habitats (i.e. substrate and water quality). Disturbance of aquatic habitats has a detrimental effect on aquatic community composition by reducing species diversity and the overall quality of aquatic habitats. Project construction will result in clearing and degrading portions of these communities. Physical alterations to aquatic habitats can result in the following impacts to aquatic communities:

- Inhibition of plant growth.
- Algae blooms resulting from increased nutrient concentrations.

Most of the existing bridge may be removed without dropping pieces in the water. These components comprise approximately 765 cubic meters (1000 cubic yards) of material. However, there is the potential for approximately 315 cubic meters (410 cubic yards) of temporary fill material from the two bascule piers/ machinery rooms to be dropped into Waters of the U.S. during construction.

c. Rare And Protected Species

Some populations of fauna and flora have been in, or are in, the process of decline either due to natural forces or their inability to coexist with human development. Federal law (under the provisions of the Endangered Species Act of 1973, as amended) requires that any action, likely to adversely affect a species classified as federally-protected, be subject to review by the United States Fish and Wildlife Service (FWS). Other species may receive additional protection under separate state laws.

1). Federally-Protected Species

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under the provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003, the FWS lists fourteen species as federally-protected for Carteret County. A brief description of the characteristics and habitat requirements for this species along with a conclusion regarding potential project construction impacts follows Table 15.

Table 15
Federally-Protected Species for Carteret County

Common Name	Scientific Name	Status
Shortnose sturgeon	Acipenser brevirostrum	Endangered
American alligator	Alligator mississippiensis	T(S/A)
Loggerhead sea turtle	Caretta caretta	Threatened
Piping plover	Charadrius melodus	Threatened
Leatherback sea turtle	Dermochelys coriacea	Endangered
Eastern cougar	Felis concolor Cougar	Endangered
Red-cockaded woodpecker	Picoides borealis	Endangered
Seabeach amaranth	Amaranthuspumilus	Threatened
Rough-leaved loosestrife	Lysimachia asperulaefolia	Endangered
Hawksbill turtle	Eretmochelys imbricate	Endangered
Peregrine Falcon	Falco peregrinus anatum	Endangered
Kemp's ridley sea turtle	Lepidochelys kempii	Endangered
Roseate tern	Sterna dougalli	Endangered
Manatee	Trichechus manatus	Endangered
Green sea turtle	Chelonia mydas	Threatened

Note:

- Endangered- A taxon "in danger of extinction throughout all or a significant portion of its range.
- Threatened- A taxon "likely to be becoming endangered within the foreseeable future throughout all or a portion of its range."
- T(S/A)- Threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

Alligator mississippiensis (American alligator) **Threatened(S/A)**

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the American alligator does exist within the project vicinity. However, this species was not observed in the project vicinity during the natural resources investigation. The project was visited on the dates listed in Section 1.2. In addition, a review of the North Carolina Natural Heritage Program (NCNHP) database does not contain any records of American alligators occurring within the project vicinity. NCDOT examined the NCNHP records on December 16, 1999. Therefore, no threat will be made to this species during project construction. **The American alligator is listed threatened due to similarity of appearance. These species are not biologically endangered or threatened and are not subject to Section 7 consultation (Endangered Species Act); therefore, a survey is not required.**

Caretta caretta (loggerhead turtle) **Threatened**

The loggerhead nests on suitable beaches from Ocracoke inlet, North Carolina through Florida and on a small scale off of the Gulf States. There are also major nesting grounds on the eastern coast of Australia. It lives worldwide in temperate to subtropical waters. Loggerheads nest nocturnally between May and September on isolated beaches that are characterized by fine grained sediments. It is mainly carnivorous feeding on small marine animals.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Loggerhead turtle does exist within the project vicinity. The loggerhead turtle could potentially enter the project area via Gallants Channel. Factors influencing sea turtle movement into inshore waters in North Carolina include water mass, gulf stream currents and water temperature (Schwartz 1989). However, it is unlikely that project construction will interfere with the movement or feeding opportunities of this species. Nesting habitat will not be impacted by the proposed project. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Loggerhead sea turtle within the project vicinity. NCNHP records show no recorded observations of the Leatherback sea turtle within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Charadrius melodus (piping plover) **Threatened**

The piping plover is a small migratory shorebird that resembles a sandpiper.

The piping plover breeds along the east coast. This bird in North Carolina, nest in flat areas with fine sand and mixtures of shells and pebbles. They nest most commonly where there is little or no vegetation, but some may nest in stands of beachgrass. The nest is a shallow depression in the sand that is usually lined with shells and pebbles.

The piping plover is very sensitive to human disturbances. The presence of people can cause the plover to abandon its nest and quit feeding.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the piping plover does not exist within project vicinity. This species is usually found on extensive sand flats with sparse vegetation and dunes during the breeding season (Fussell 1994). During the winter they are found on tidal flats around the inlets (Fussell 1994). During the migration seasons they are commonly found on ocean beaches (Fussell 1994). A survey of the project was conducted on June 1, 1999 by NCDOT biologists Logan Williams and Sue Brady. No extensive sand flats were found

within the proposed corridors. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the piping plover within the project vicinity. NCNHP records show no recorded observations of the piping plover within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Dermochelys coriacea (leatherback sea turtle) **Endangered**

The leatherback sea turtle is the largest of the marine turtles. Unlike other marine turtles, the leatherback has a shell composed of tough leathery skin.

Leatherbacks are distributed world-wide in tropical waters of the Atlantic, Pacific, and Indian oceans. Leatherbacks prefer deep waters and are often found near the edge of the continental shelf. In northern waters they are reported to enter into bays, estuaries, and other inland bodies of water. Leatherback nesting requirements are very specific, they need sandy beaches backed with vegetation in the proximity of deep water and generally with rough seas. Beaches with a suitable slope and a suitable depth of coarse dry sand are necessary for the leatherback to nest. Major nesting areas occur in tropical regions and the only nesting population in the United States is found in Martin County, Florida.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Leatherback sea turtle does exist within the project vicinity. The leatherback turtle could potentially enter the project area via Gallants Channel. Factors influencing sea turtle movement into inshore waters in North Carolina include water mass, gulf stream currents and water temperature (Schwartz 1989). However, it is unlikely that project construction will interfere with the movement or feeding opportunities of this species. Nesting habitat will not be impacted by the proposed project. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Leatherback sea turtle within the project vicinity. NCNHP records show no recorded observations of the Leatherback sea turtle within the project vicinity. Therefore, project construction will have no effect on this species.

Felix concolor cougar (eastern cougar) **Endangered**

Cougars are tawny colored with the exception of the muzzle, the backs of the ears, and the tip of the tail, which are black. In North Carolina the cougar is thought to occur in only a few scattered areas, possibly including coastal swamps and the southern Appalachian mountains. The eastern cougar is found in large remote wilderness areas where there is an abundance of their primary food source, white-tailed deer. A cougar will usually occupy a range of 40.2 kilometers (25.0 miles) and they are most active at night.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the eastern cougar is not found within the project vicinity. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the eastern cougar within the project vicinity. NCNHP records show no recorded observations of the eastern cougar within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Picoides borealis (red-cockaded woodpecker) **Endangered**

The adult red-cockaded woodpecker (RCW) uses open old growth stands of southern pines, particularly longleaf pine (*Pinus palustris*), for foraging and nesting habitat. A forested stand must contain at least 50% pine, lack a thick understory, and be contiguous with other stands to be appropriate habitat for the RCW. These birds nest exclusively in trees that are greater than 60 years old and are contiguous with pine stands at least 30 years of age. The foraging range of the RCW is up to 200.0 hectares (500.0 acres). This acreage must be contiguous with suitable nesting sites.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Red-cockaded woodpecker is not found within the project vicinity. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Red-cockaded woodpecker within the project vicinity. NCNHP records show no recorded observations of the Red-cockaded woodpecker within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Amaranthus pumilus (seabeach amaranth) **Threatened**

Flowers Present: June to frost

Seabeach amaranth is an annual legume that grows in clumps containing 5 to 20 branches and are often over a foot across.

Seabeach amaranth is endemic to the Atlantic Coastal Plain beaches. Habitat for seabeach amaranth is found on barrier island beaches functioning in a relatively dynamic and natural manner. Seabeach amaranth grows well in overwash flats at the accreting ends of islands and the lower foredunes and upper strands of noneroding beaches. Temporary populations often form in blowouts, sound-side beaches, dredge spoil, and beach replenishment. This species is very intolerant to competition and is not usually found in association with other species. Threats to seabeach amaranth include beach stabilization projects, all terrain vehicles (ATV's), herbivory by insects and animals, beach grooming, and beach erosion.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Seabeach Amaranth does not exist within the project vicinity. The project does not impact the barrier beach landscape. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Seabeach Amaranth within the project vicinity. NCNHP records show no recorded observations of the Seabeach Amaranth within the project vicinity. Therefore, project construction will have no effect on this species. NCNHP records were reviewed by Environmental Biologist Clay Willis on December 16, 1999.

Lysimachia asperulaefolia (rough-leaved loosestrife) **Endangered**

Flowers Present: June

Rough-leaved loosestrife is a perennial herb having slender stems and whorled leaves. This herb has showy yellow flowers that usually occur in threes or fours. Fruits are present from July through October.

Rough-leaved loosestrife is endemic to the coastal plain and sandhills of North and South Carolina. This species occurs in the ecotones or edges between longleaf pine uplands and pond pine pocosins (areas of dense shrub and vine growth usually on a wet, peat, poorly drained soil), on moist to seasonally saturated sands and on shallow organic soils overlaying sand. It has also been found to occur on deep peat in the low shrub community of large Carolina bays (shallow, elliptical, poorly drained depressions of unknown origins). The areas it occurs in are fire maintained. Rough-leaved loosestrife rarely occurs in association with hardwood stands and prefers acidic soils.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Rough-leaf Loosestrife does not exist within the project vicinity. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Rough-leaf Loosestrife within the project vicinity. NCNHP records show no recorded observations of the Rough-leaf Loosestrife within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Sterna dougallii (roseate tern) **Endangered**

The roseate tern is a small whitish seabird. In North Carolina, roseate tern is most commonly seen from late July to October (peak time is in early September) as a migrant. These birds are often sighted in full breeding plumage, and found with mixed terns. The roseate tern nests on isolated, less disturbed coastal islands in areas characterized by sandy, rocky, or clayey substrates with either sparse or thick vegetation. Eggs are usually laid such that grasses or overhanging objects provide shelter. They may also nest in marshes, but it is an uncommon occurrence. There is only one nesting record for North Carolina, but it is thought likely that additional nesting records will be found in the future.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable nesting habitat for the Roseate Tern in the form of less disturbed coastal islands does not occur within the project vicinity. In North Carolina this species is usually found offshore and has only been recorded inshore on rare occasions (Fussell 1994). Most records from North Carolina are from Cape Hatteras Point in Dare County and Cape Lookout Point in Carteret County (Fussell 1994). The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Roseate Tern within the project vicinity. NCNHP records were reviewed and show no recorded observations of the Roseate Tern within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Lepidochelys kempii (Kemp's ridley sea turtle) **Endangered**

Kemp's ridley sea turtle is the smallest of the sea turtles that visit North Carolina's coast. These turtles have a triangular shaped head and a hooked beak with large crushing surfaces

Kemp's ridley sea turtles live in shallow coastal and estuarine waters, in association with red mangrove trees. A majority of this sea turtle's nesting occurs in a 24 km (14.9 mile) stretch of beach between Barra del Tordo and Ostioal in the state of Tamaulipas, Mexico. This turtle is an infrequent visitor to the North Carolina coast and usually does not nest here. Kemp's ridley sea turtles prefer beach sections that are backed up by extensive swamps or large bodies of open water having seasonal narrow ocean connections and a well defined elevated dune area.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Kemp's ridley does exist within the project vicinity. The Kemp's ridley turtle could potentially enter project area via Gallants Channel. However, project construction will unlikely interfere with the movement or feeding opportunities of this species. Nesting habitat will not be impacted by the proposed project. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Kemp's ridley within the project vicinity. NCNHP records were reviewed and show no recorded observations of the Kemp's ridley within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Chelonia mydas (green sea turtle) **Threatened**

The distinguishing factors found in the green sea turtle are the single clawed flippers and a single pair of elongated scales between the eyes. This sea turtle has a small head and a strong, serrate, lower jaw.

The green sea turtle is found in temperate and tropical oceans and seas. Nesting in North America is limited to small communities on the east coast of Florida requiring beaches with minimal disturbances and a sloping platform for nesting (they do not nest in NC). The green sea turtle can be found in shallow waters. They are attracted to lagoons, reefs, bays, Mangrove swamps and inlets where an abundance of marine grasses can be found, marine grasses are the principle food source for the green turtle.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Green sea turtle does exist within the project vicinity. Green sea turtle could potentially enter project area via Gallants Channel. However, project construction will unlikely interfere with the movement or feeding opportunities of this species. Nesting habitat will not be impacted by the proposed project. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Green sea turtle within the project vicinity. NCNHP records show no recorded observations of the Green sea turtle within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

Trichechus manatus (West Indian manatee) **Endangered**

The manatee is a large, gray or brown, barrel shaped, aquatic mammal.

Manatees are found in canals, sluggish rivers, estuarine habitats, salt water bays, and as far off shore as 5.4 km (3.7 miles). They are found in freshwater and marine habitats at shallow depths of 15 inches or higher. In the winter, between October and April, manatees concentrate in areas with warm water. During other times of the year habitats appropriate for the manatee are those with sufficient water depth, an adequate food supply, and in proximity to freshwater. It is believed that manatees require a source of freshwater to drink. Manatees are primarily herbivorous, feeding on any aquatic vegetation present, but they may occasionally feed on fish.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Manatee does exist within the project vicinity. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Manatee within the project vicinity. NCNHP records show 49 recorded observations of the Manatee within N.C. waters since 1977. Two of the most recent Manatee observations were within the project vicinity. Observations of Manatees were recorded on August 8 and 18 of 1999. The location of these observations were approximately .5 miles south of the project area. They were observed by Jeremy Russ of the National Marine Fisheries. Environmental Technician Clay Willis reviewed NCNHP records on December 16, 1999. However, no populations within N.C. waters of the Manatee have been recorded in the NCNHP database. These species typically inhabit more southern

waters but are occasionally spotted in N.C. waters. The U.S. Fish and Wildlife Service has developed a list of "Precautions for the general construction in areas which may be used by the West Indian manatee in North Carolina." If these precautions are considered in all aspects of project construction, this project will not effect the West Indian manatee.

PRECAUTIONS FOR GENERAL CONSTRUCTION IN AREAS WHICH MAY BE USED BY THE WEST INDIAN MANATEE IN NORTH CAROLINA

The North Carolina Field Office of the FWS has developed recommendations for general construction activities in aquatic areas which may be used by the manatee. Since the manatee is considered a seasonal inhabitant of North Carolina with reported occurrences being greatest during the months of June through October, the Service prefers that in-water construction which can be completed in several months be scheduled during the seven month period of November through May. However, the Service believes that the implementation of the following recommendations will allow major, in-water construction projects which do not require blasting to proceed without adverse impacts to manatees. While most conditions must be implemented throughout the year, other requirements may be implemented only during the period when manatees are most likely to be in North Carolina waters, currently considered to be the months of June through October. The conditions which should be implemented throughout the year are:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, primarily during the months of June through October, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.
2. The project manager and/or the contractor will advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the ESA.
3. If a manatee is seen within 100 yards of the active construction/dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition.
4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the Service's manatee coordinator in Jacksonville, FL (ph. 904-232-2580), the Raleigh Field Office (ph. 919-856-4520), and the North Carolina Wildlife Resources Commission (ph. 919-224-1288). The project manager should

coordinate with the Service immediately prior to the start of construction for the name and current telephone number of the individuals to be contacted.

5. A sign should be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of operating equipment. A collision with and or injury to the manatee will be reported immediately the US Fish and Wildlife Service at 919-856-4520 and the North Carolina Wildlife Resources Commission at 919-224-1288.

6. The contractor will maintain a log detailing sightings, collisions, or injuries to manatees during project construction. After construction the project manager will prepare a report which summarizes all information on manatees during construction. This report will be submitted to the Service's Raleigh Field Office and NCWRC. The following conditions will only be required for construction during the period from June 1 through October 31, the period when manatees are most likely to be in North Carolina:
7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

For projects which require an Environmental Assessment or Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA), the inclusion of these conditions in the environmental document as part of the determination of impacts on the manatee will expedite the Service's review of the NEPA document for the fulfillment of requirements under Section 7 of the ESA.

NCDOT will implement the "Precautions For General Construction In Areas Which May Be Used By The West Indian Manatee In North Carolina." These conditions are outlined in Section VI.D.1.c of this report. NCDOT will make every effort to schedule in-water construction from November until May when manatees are not likely to be in North Carolina Waters.

Eretmochelys imbricata (Hawksbill sea turtle) **Endangered**

The Hawksbill sea turtle is found in tropical and subtropical oceans. Sightings have been reported on the east coast of the U.S. as far north as Massachusetts, although rarely north of Florida. The adult turtle can be found in coastal waters, especially around coral reefs, rocky outcrops, shoals mangrove bays, and estuaries. Juveniles are often seen offshore, in floating mats of seaweed.

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for the Hawksbill sea turtle does exist within the project vicinity. Hawksbill sea turtle could potentially enter project area via Gallants Channel. However, project construction will unlikely interfere with the movement or feeding opportunities of this species. Nesting habitat will not be impacted by the proposed project. The North Carolina Natural Heritage Program (NCNHP) records were reviewed for sightings of the Hawksbill sea turtle within the project vicinity. NCNHP records show no recorded observations of the Hawksbill sea turtle within the project vicinity. Therefore, project construction will have no effect on this species. Environmental Biologist Clay Willis reviewed NCNHP records on December 16, 1999.

2). Federal Species of Concern and State Listed Species

Federal species of concern are not afforded federal protection under the Endangered Species Act and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. However, the status of these species is subject to change, and so should be included for consideration. Federal Species of Concern (FSC) are defined as a species that is under consideration for listing for which there is insufficient information to support listing. In addition, organisms which are listed as Endangered (E), Threatened (T), or Special Concern (SC) by the North Carolina Natural Heritage Program list of Rare Plant and Animal Species are afforded state protection under the NC State Endangered Species Act and the NC Plant Protection and Conservation Act of 1979. There are twenty-two federal species of concern listed by the FWS for Carteret County (see Table 16).

Table 16
Federal Species of Concern for Carteret County

Scientific Name	Common Name	NC Status	Habitat
<i>Aimophila aestivalis</i>	Bachman's sparrow	SC	YES
<i>Ammodramus henslowii</i>	Henslow's sparrow	SR	YES
<i>Heterodon simus</i>	Southern hognose snake	SR/PSC	NO
<i>Laterallus jamaicensis</i>	Black rail	SR	YES
<i>Malaclemys terrapin terrapin</i>	Northern diamondback	SC	YES
<i>Ophisaurus mimicus</i>	Mimic glass lizard	SC/PT	YES
<i>Passerina ciris ciris</i>	Eastern painted bunting	SR*	YES
<i>Rana capito capito</i>	Carolina gopher frog	SC/PT	NO
<i>Atrytone arogos arogos</i>	Arogos skipper	SR	NO
<i>Hemipachnobia subporphyrea</i>	Venus flytrap cutworm moth	SR	NO
<i>Procambarus plumimanus</i>	Croatan crayfish	W3	YES
<i>Spartiniphaga carterae</i>	Carter's noctuid moth	SR	NO
<i>Carex chapmanii</i>	Chapman's sedge	WI	NO
<i>Dionaea muscipula</i>	Venus flytrap	C-SC	NO
<i>Litsea aestivalis</i>	Pondspice	C	NO
<i>Myriophyllum laxum</i>	Loose watermilfoil	T	NO
<i>Oxypolis ternata</i>	Savanna cowbane	WI	NO
<i>Solidago pulchra</i>	Carolina goldenrod	E	NO
<i>Tofieldia glabra</i>	Carolina asphodel	C	NO
<i>Trichostema sp. 1</i>	Dune bluecurls	C	YES
<i>Campylopus carolinae</i>	Savanna campylopus	C	NO
<i>Rhynchospora pleiantha</i>	Coastal beakseder	C	NO

"E"--An Endangered species is one whose continued existence as a viable component of the State's flora is determined to be in jeopardy.

"T"--A Threatened species is one which is likely to become endangered species within the foreseeable future throughout all or a significant portion of its range.

"SC"--A Special Concern species is one which requires monitoring but may be taken or collected and sold under regulations adopted under the provisions of Article 25 of Chapter II of the General Statutes (animals) and the Plant Protection and Conservation Act (plants). Only propagated material may be sold of Special Concern plants that are also listed as Threatened or Endangered.

"C"--A Candidate species is one which is very rare in North Carolina, generally with 1 - 20 populations in the state, generally substantially reduced in numbers by habitat destruction, direct exploitation or disease. The species is also either rare throughout its range or disjunct in North Carolina from a main range in a different part of the country or the world. "SR"--A Significantly Rare species is one which is very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by

habitat destruction, direct exploitation or disease. The species is generally more common elsewhere in its range, occurring peripherally in North Carolina.

"W1"--A Watch Category 1 species is a rare species whose status in North Carolina is relatively well known and which appears to be relatively secure at this time.

"W3"--A Watch Category 3 species is a species which is poorly known in North Carolina, but is not necessarily considered to be declining.

"P"--denotes a species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the listing process.

* --Historic record - the species was last observed in the county more than 50 years ago.

A review of the NCNHP database of rare species and unique habitats shows 5 occurrences of rare species within the project vicinity. Surveys for FSC species were not conducted during the site visit.

2. Physical Resources

Soil and water resources that occur in the project area are discussed below with respect to possible environmental concerns. Soil properties and site topography significantly influence the potential for soil erosion and compaction, along with other possible construction limitations or management concerns. Water resources within the project area present important management limitations due to the need to regulate water movement and the increased potential for water quality degradation. Excessive soil disturbance resulting from construction activities can potentially alter both the flow and quality of water resources, limiting downstream uses. In addition, soil characteristics and the availability of water directly influence the composition and distribution of flora and fauna in biotic communities, thus affecting the characteristics of these resources.

a. Topography and Soils

Carteret County is in the Lower Coastal Plain physiographic region of North Carolina. It is drained by the Neuse, Newport, North, South, and White Oak Rivers and numerous creeks that drain into the sounds and bays. The general slope of the county is to the east and southeast. About 92 percent of the land is nearly level, 6 percent is gently sloping, and 2 percent is sloping to moderately steep. There are five physiographic areas in the county. They consist of the Talbot Surface, the low marine terrace and stream terraces of the Pamlico Surfaces, the islands of the Outer Banks, the salt marshes, and the forested flood plains along streams. The highest elevations range from 20 to 40 feet in the uplands of the Talbot Surface. Elevations on the Outer Banks ranges from sea level to nearly 40 feet. The salt marshes are less than 2 feet in elevation. About 64 percent of the soils in Carteret County are very poorly drained, 15 percent are poorly drained, 3 percent are somewhat poorly drained, 7 percent are moderately well drained, 3 percent are well drained, and 5 percent are excessively drained.

Generally, soils are characterized into Soil Associations or "General Soil Mapping Units" with consistent patterns of soil, relief, and drainage. The project study area in Carteret County lies within an area of three soil mapping units. "General Soil Mapping

Units" include Lafitte-Hobucken-Carteret, Altavista-Augusta-State and Leon-Murville-Mandarin. The Lafitte-Hobucken-Carteret grouping is nearly level, very poorly drained, mucky and sandy soils; in marshes flooded frequently with salt water (USDA 1978). Altavista-Augusta-State grouping is nearly level, moderately well drained, somewhat poorly drained, and well drained, sandy soils; on low marine and stream terraces. (USDA 1978) Leon-Murville-Mandarin grouping is nearly level to gently sloping, poorly drained, very poorly drained, and somewhat poorly drained, sandy soils that have a subsoil in which organic matter has accumulated; on uplands and low marine terraces. (USDA 1978) There are eight soil types located in the project area. A brief description of these soil types is provided in Table 17.

Table 17
Soils Occurring In The Project Area, Carteret County

Map Symbol	Specific Mapping Unit	% Slope	Hydric Classification	Capability Unit
Mc	Mandarin-Urban land Complex	Nearly level	Inclusions of Hydric soils	Not Assigned
Lu	Leon-Urban land Complex	Nearly level, Gently sloping	Hydric	Not Assigned
Nd	Newhan fine sand	2 - 30 %	Inclusions of Hydric soils	VIII _s
Cu	Corolla-Urban land Complex	Nearly level, Gently sloping	Non-hydric	Not Assigned
Tm	Tomotley fine sandy loam	Nearly level	Hydric	III _w (drained) IV _w (undrained)
AaA	Altavista loamy fine sand	0 - 2 %	Non-hydric	I _w
Ag	Augusta loamy fine sand	Nearly level	Inclusions of Hydric soils	III _w
CH	Carteret sand	Nearly level	Hydric	VIII _w

b. Water Resources

This section contains information concerning surface water resources likely to be impacted by the proposed project. Water resource assessments include the physical characteristics, best usage standards, and water quality aspects of the water resources, along with their relationship to major regional drainage systems. Probable impacts to surface water resources are also discussed, as are means to minimize impacts.

Best Usage Classification

Water resources within the study area are located in the White Oak River Drainage Basin; Division of Water Quality sub-basin number 03-05-01; United States Department of Interior Hydrologic Unit is 03020106. The main water resource in the

project's vicinity is the Newport river which branches into Morehead City Channel and Gallants Channel (Beaufort Channel) before entering Bogue Sound and Beaufort Inlet. The water resources located within the transportation improvement project (R-3307) area will include Gallants Channel (Beaufort Channel), Town Creek, and a tributary to Turner Creek.

Streams have been assigned a best usage classification by the Division of Water Quality (DWQ), formerly Division of Environmental Management (DEM), which reflects water quality conditions and potential resource usage. Unnamed tributaries receive the same classification as the streams to which they flow (see classifications listed in Table 18).

Table 18
Water Resources Classification

Water Resource	DEM Index No.	Date	Classification
Gallants(Beaufort) Channel	21-(17)	06/01/56	SA
Town Creek	21-(33)	06/01/56	SC
Turner Creek	21-35-1-11-1	06/01/56	SA

- SA waters indicate suitable areas for commercial shellfishing and all other tidal saltwater uses.
- SC waters indicate aquatic life propagation/protection and secondary recreation.

There are waters within the project vicinity classified as High Quality Waters (HQW). These areas are in the Newport river (Beaufort, Gallants, Morehead Channel), Bogue Sound, Taylors Creek, Town Creek, and Turner Creek. Waters in this area are not designated as a North Carolina Natural and Scenic River, nor are they designated as a National Wild and Scenic River.

NCDOT will implement Design Standards for Sensitive Watershed Sedimentation Control Guidelines in addition to standard Best Management Practices.

Physical Characteristics of Surface Waters

The proposed project crosses Gallants (Beaufort) Channel. The sounds and bays of the Beaufort region obtain little fresh water inflow. Therefore, the salinity is similar to that of the open ocean. The normal variation in the salinity of Beaufort Channel is 30-35 p.p.t. (Van Dover and Kirby-Smith 1979). Water temperatures in Beaufort channel range from 3° C in the winter to 30° C in the summer (Van Dover and Kirby-Smith 1979). The typical tide range in the vicinity of Beaufort is approximately 1 meter (3 feet). However, the tidal range may fluctuate according to the lunar cycle. The substrate of Beaufort Channel in the project vicinity is composed of fine sand.

Water Quality

This section describes the quality of the water resources within the project area. Potential sediment loads and toxin concentrations of these waters from both point sources and nonpoint sources are evaluated. Water quality assessments are made based on published resource information and existing general watershed characteristics. This data provide insight into the value of water resources within the project area to meet human needs and to provide habitat for aquatic organisms.

Benthic Macroinvertebrate Ambient Network

The Benthic Macroinvertebrate Ambient Network (BMAN), managed by the DWQ, is part of an ongoing ambient water quality monitoring program which addresses long term trends in water quality. The program monitors ambient water quality by sampling at fixed sites for selected benthic macroinvertebrates organisms, which are sensitive to water quality conditions.

There are five BMAN monitoring stations within the project vicinity. These BMAN sites are located in an estuarine environment. The Department of Water Quality (DWQ) is currently working to establish a biological water quality rating system using BMAN's within estuarine waters. Since it has not been finalized, actual ratings for the water quality in association with BMAN data can not be established.

Point Source and Nonpoint Source Dischargers

Point source dischargers located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) Program. Any discharger is required to register for a permit. There are five permitted dischargers within the project vicinity.

Nonpoint source discharge refers to runoff that enters surface waters through stormwater or snowmelt. Agricultural activities may serve as a source for various forms of nonpoint source pollutants. Land clearing and plowing disturbs soils to a degree where they are susceptible to erosion, which can lead to sedimentation in streams. Sediment is the most widespread cause of nonpoint source pollution in North Carolina. Pesticides, chemical fertilizers, and land application of animal wastes can be transported via runoff to receiving streams and potentially elevate concentrations of toxic compounds and nutrients. Animal wastes can also be a source of bacterial contamination and elevate biochemical oxygen demand (BOD). Drainage ditches on poorly drained soils enhances the transportation of stormwater into surface waters (DEM, 1993). The land use conditions of the project vicinity are mostly developed with some agricultural fields and pine plantations.

Summary of Anticipated Impacts

Construction of the proposed project will impact water resources by the following processes: pavement installation, removal of the existing bridge, construction of the new bridge. In addition, fertilizer and pesticide use during revegetation could potentially impact water resources. The following impacts to surface water resources are likely to result from the above mentioned construction activities.

- Increased sedimentation and siltation from project construction activities.
- Changes in light incidence and water clarity due to increased sedimentation.
- Increased nutrient loading via resuspension of sediments from bridge removal.
- Increased concentrations of toxic compounds in roadway runoff.
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles.

Precautions should be taken to minimize impacts to water resources in the study area. NCDOT's Best Management Practices for the Protection of Surface Waters and Sedimentation Control guidelines must be strictly enforced during the construction stage of the project. DOT has committed to Design Standards in Sensitive Watersheds. These provisions were established in order to preclude unnecessary contamination by toxic substances during the construction interval and should be strictly enforced.

3. Waters Of The United States

Surface waters and wetlands fall under the broad category of "Waters of the United States," as defined in Section 33 of the Code of Federal Register (CRF) Part 328.3. Any action that proposes to dredge or place fill material into surface waters or wetlands falls under the jurisdiction of the U.S. Army Corps of Engineers (COE) under Section 404 of the Clean Water Act (33 U.S.C. 1344). Surface waters include all standing or flowing waters which have commercial or recreational value to the public. Wetlands are identified based on the presence of hydric soils, hydrophytic vegetation, and saturated or flooded conditions during all or part of the growing season.

a. Characteristics of Wetlands and Surface Waters

Potential wetland communities were evaluated using the criteria specified in the 1987 "Corps of engineers Wetlands Delineation Manual". For an area to be considered a "wetland", the following three specifications must be met: 1) presence of hydric soils (low soil chroma values) 2) presence of hydrophytic vegetation, and 3) evidence of hydrology, including: saturated soils, stained leaf litter, oxidized rhizospheres, matted vegetation, high water marks on trees, buttressed tree bases and surface roots.

b. Summary of Anticipated Impacts to Wetlands and Surface Waters

Highway construction impacts can affect the functions that wetlands perform in an ecosystem. Wetlands influence regional water flow regimes by intercepting and storing storm runoff which ultimately reduces the danger of flooding in surrounding and downstream areas. Wetlands have been documented to remove organic and inorganic nutrients and toxic materials from water that flows across them.

Seventeen wetland sites were identified in the project area (see Appendix A, Figure 10). These sites were classified using the classification scheme of Cowardin et al. (1979) and quantitatively evaluated using the DEM wetland rating system (DEHNR 1995), which assigns a numerical value (0-100) to a particular wetland based on wetland quality and function. This wetland rating system is heavily weighted towards water storage, bank/shoreline stabilization, pollutant removal and life functions of a wetland community. In addition, attributes such as wildlife habitat, recreational and educational values are also considered. Table 19 gives the classification, and DEM rating of each wetland site. Wetland impacts are given for each alternative in Table 20. Tables 21 and 22 provide impacts to CAMA wetlands and to 404 wetlands.

Table 19
Wetland Sites and Classifications

Wetland Site	Cowardin Classification	Community Type	DEM Classification
A	E2SS7P	Salt Marsh	NA
B	E2SS7P	Salt Marsh	NA
C	E2EM1N	Salt Marsh	NA
D	PSS1/E	Disturbed Scrub Shrub	37
E	PSS1/E	Disturbed Scrub Shrub	37
F	PSS1/E	Disturbed Scrub Shrub	37
G	E2SS7Pd	Salt Marsh	NA
H	E2EM1N	Salt Marsh	NA
I	E2EM1N	Salt Marsh	NA
J	E2EM1N	Salt Marsh	NA
K	E2EM1N	Salt Marsh	NA
L	PFO4/1E	Pine Flat	22
M	PFO4/1E	Pine Flat	22
N	PFO4/1E	Pine Flat	22
O	PFO4/1E	Pine Flat	22
P	E2EM1N	Salt Marsh	NA
Q	E2EM1N	Salt Marsh	NA

Notes:

E2SS7P denotes Estuarine, Intertidal, Scrub-shrub, Evergreen, Irregularly flooded.

E2EM1N denotes Estuarine, Intertidal, Emergent, Persistent, Regularly flooded.

E2SS7Pd denotes Estuarine, Intertidal, Scrub-shrub, Evergreen, Irregularly flooded, Partially Drained or Ditched

PFO 4/1A denotes Palustrine, Forested, Needle-Leaved Evergreen, Seasonal Saturate

PSS1/E denote Palustrine Scrub Shrub, Broad-Leaf Deciduous, Season Flood Saturate

Bridge Demolition and Removal

Bridge No. 29 is located on US 70 over Gallants Channel (also known as Beaufort Channel) in Carteret County. It has 14 approach spans and a bascule main span totaling 205 meters (673 feet). The superstructure is composed of a concrete deck, concrete bridge railings, and a steel bascule span. The substructure is composed of concrete caps and piles.

Based on conversations with Bridge Maintenance representatives, most of the bridge may be removed without dropping pieces in the water. These components comprise approximately 765 cubic meters (1000 cubic yards) of material. The bascule spans and weights may be removed by crane. A barge may be used to contain the debris as each approach span and bent cap is removed. The bent piles may be removed with a

vibratory hammer or water jet.

There is the potential for components of the two bascule piers/ machinery rooms to be dropped into Waters of the U.S. during construction. The resulting temporary fill associated with these rooms is approximately 315 cubic meters (410 cubic yards).

A decision has not been made yet to remove the drawbridge. It does not have to be removed with any of the current alternatives.

Table 20
Wetland Impacts

Wetland	Wetland	Alternative 1A		Alternative 1E		Alternative 2A		Alternative 2D		Alternative 2E	
Type	Site	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
Salt Marsh	A	0.00	0.00	0.00	0.00	0.03	0.07	0.03	0.07	0.03	0.07
Salt Marsh	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Marsh	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disturbed Scrub Shrub	D	0.00	0.00	0.00	0.00	0.42	1.03	0.42	1.03	0.42	1.03
Disturbed Scrub Shrub	E	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01
Disturbed Scrub Shrub	F	0.00	0.00	0.00	0.00	0.02	0.04	0.02	0.04	0.02	0.04
Salt Marsh	G	0.00	0.00	0.00	0.00	0.56	1.38	0.56	1.38	0.56	1.38
Salt Marsh	H	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.03	0.01	0.03
Salt Marsh	I	0.17	0.42	0.17	0.42	0.17	0.42	0.17	0.42	0.17	0.42
Salt Marsh	J	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.03
Salt Marsh	K	0.02	0.04	0.02	0.04	0.01	0.03	0.01	0.03	0.01	0.03
Pine Flat	L	0.00	0.00	0.00	0.00	0.07	0.17	0.04	0.10	0.04	0.10
Pine Flat	M	1.42	3.51	1.24	3.07	1.27	3.13	0.01	0.02	0.01	0.02
Pine Flat	N	0.00	0.00	0.91	2.24	0.00	0.00	0.00	0.00	0.91	2.24
Pine Flat	O	2.65	6.54	0.00	0.00	2.65	6.54	2.65	6.54	0.00	0.00
Salt Marsh	P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Marsh	Q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		4.3	10.5	2.3	5.8	5.2	12.9	3.9	9.7	2.2	5.4

Table 21
Impacts to Salt Marsh Communities (CAMA)

Wetland Site	Alt 1A	Alt 1E	Alt 2A	Alt 2D	Alt 2E
A	0/0	0/0	.03/.07	.03/.07	.03/.07
B	0/0	0/0	0/0	0/0	0/0
C	0/0	0/0	0/0	0/0	0/0
G	0/0	0/0	.56/1.38	.56/1.38	.56/1.38
H	0/0	0/0	.01/.03	.01/.03	.01/.03
I	.17/.42	.17/.42	.17/.42	.17/.42	.17/.42
J	.01/.03	.01/.03	.01/.03	.01/.03	.01/.03
K	.02/.04	.02/.04	.01/.03	.01/.03	.01/.03
P	0/0	0/0	0/0	0/0	0/0
Q	0/0	0/0	0/0	0/0	0/0
Total Impacts	.2/.49	.2/.49	.79/1.96	.79/1.96	.79/1.96

Note: Hectares/Acres

Table 22
Impacts to Freshwater (404) Wetland Communities

Wetland Site	Alt 1A	Alt 1E	Alt 2A	Alt 2D	Alt 2E
D	0/0	0/0	.42/1.03	.42/1.03	.42/1.03
E	0/0	0/0	0/.01	0/.01	0/.01
F	0/0	0/0	.02/.04	.02/.04	.02/.04
L	0/0	0/0	.07/.17	.04/.10	.04/.10
M	1.42/3.51	1.24/3.07	1.27/3.13	.01/.02	.01/.02
N	0/0	.91/2.24	0/0	0/0	.91/2.24
O	2.65/6.54	0/0	2.65/6.54	2.65/6.54	0/0
Total Impacts	4.07/10.04	2.15/5.31	4.43/10.92	3.14/7.74	1.4/3.44

Note: Hectares/Acres

4. Permits

Impacts to jurisdictional surface waters are anticipated from the proposed project. As a result, construction activities will require permits and certifications from various regulatory agencies in charge of protecting the water quality of public water resources.

a. Federal Permits

Permits will be required from the U. S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act, as codified at 33 CFR Part 323, for discharges of

dredged or fill material into waters of the United States. Nationwide Permits may apply to minor roadway crossings. However, it is likely that an Individual Permit will be required for the entire project.

The Clean Water Act provides for public notice and review of Section 404 permit applications, as well as review by the U. S. Fish and Wildlife Service and National Marine Fisheries Service, and approval by the U. S. Environmental Protection Agency.

It is anticipated that a U. S. Coast Guard permit will be required for the bridge crossings of navigable waterways, specifically Gallant's Channel and Town Creek. If a U. S. Coast Guard permit is not required, permits may be required under Section 10 of the Rivers and Harbors Act of 1899 for structures in navigable waterways. The U. S. Army Corps of Engineers administers the Section 10 permit program.

b. State Permits

North Carolina requires a permit under N. C. Gen. Stat. Sec. 113-229(a), 230, Division of Coastal Management, before any excavation or fill of estuarine waters, tidelands, or saltwater marshlands. These permits are issued through the permitting provisions of the Coastal Area Management Act (CAMA), Sec. 113A-100 et. seq., which subsumes the Dredge and Fill Act. All development in areas of environmental concern requires a permit under N. C. Gen. Stat. Sec. 113A-118(a).

This project will also require a 401 Water Quality Certification from the DWQ prior to the issuance of the Nationwide Permit. Section 401 of the Clean Water Act requires that the state issue or deny water certification for any federally permitted or licensed activity that may result in a discharge to Waters of the United States. Section 401 Certification allows surface waters to be temporarily impacted for the duration of the construction or other land manipulation. The issuance of a 401 permit from the DWQ is a prerequisite to issuance of a Section 404 permit. A state stormwater permit will be required.

5. Avoidance, Minimization, Mitigation

The COE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological and physical integrity of Waters of the United States, specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization and compensatory mitigation) must be considered sequentially.

Avoidance mitigation examines all appropriate and practicable possibilities of averting impacts to Waters of the United States. According to a 1990 Memorandum of

Agreement (MOA) between the Environmental Protection Agency (EPA) and the COE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology and logistics in light of overall project purposes. Complete avoidance was not totally possible, even when widening along the existing roadways (Alternative 3).

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to Waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Thus far, minimization has involved extending the bridge for each alternative. Once an alternative is recommended, minimization will focus on decreasing the footprint of the proposed project through the reduction to median widths, right-of-way widths, fill slopes and/or road shoulder widths, and consideration to bridging wetlands.

Compensatory mitigation is not normally considered until anticipated impacts to Waters of the United States have been avoided and minimized to the maximum extent possible. It is recognized that "no net loss of wetlands" functions and values may not be achieved in each and every permit action. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, creation and enhancement of Waters of the United States, specifically wetlands. Such actions should be undertaken in areas adjacent to or contiguous to the discharge site.

6. Conceptual Mitigation Strategy

NCDOT is investigating several compensatory mitigation opportunities for unavoidable wetland impacts in the vicinity of the project. The first site is a marine construction business located on the northwest side of the existing drawbridge. This 2.4-hectare (6-acre) site is adjacent to the salt marsh and Gallants Channel. By removing fill and possible hazardous materials, this site has the potential for being restored with native salt marsh vegetation. A second site, just north of the Maritime Museum property, may also have the potential for restoring salt marsh wetlands. The third site is along the Turner Street causeway. Approximately 120 meters (395 feet) of the causeway will be replaced by a bridge. Removal of the causeway increases wildlife movement, spawning opportunities in the salt marshes, and allows better flushing.

During the final hydraulic design stages of the project, NCDOT will review the two Gallants Channel sites and other possibilities to determine if they are feasible mitigation sources for the project.

7. Flood Hazard Evaluation

Carteret County is a current participant in the National Flood Insurance Regular

Program. The crossings of Gallants Channel and Town Creek are in designated flood hazard zones, but are not included in a detailed flood study. The floodplain areas affected by the project are primarily rural and wooded with marsh wetlands, and there are no known buildings in the project vicinity with floor elevation below the 100-year flood level which would be adversely affected by the proposed improvements. The proposed replacement bridge over Gallants Channel will provide improved conveyance compared to that of the existing bridge; therefore, it will have no adverse impact on the existing floodplain and associated flood hazard. The proposed Turner Street bridge over Town Creek will also improve the conveyance for Town Creek and will not have an adverse effect on the floodplain and flood hazard.

8. Air Quality

Air pollution originates from various sources. Emissions from industrial and internal combustion engines are the most prevalent sources. Other origins of common outdoor air pollution are solid waste disposal and any form of fire. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improving the ambient air conditions. The traffic is the center of concern when determining the impact of a new highway facility or the improvement of an old highway facility. Motor vehicles emit carbon monoxide (CO), nitrogen oxide (NO), hydrocarbons (HC), particulate matter, sulfur dioxide (SO₂), and lead (Pb) (listed in order of decreasing emission rate). Automobiles are considered to be the major source of CO in the project area. For this reason, most of the analysis presented is concerned with determining expected carbon monoxide levels in the vicinity of the project due to traffic flow. Additional details regarding this air quality analysis are contained in the Air Quality Technical Report available from NCDOT (see additional information in the Summary).

a. Carbon Monoxide

In order to determine the ambient CO concentration for the receptor closest to the highway project, two concentration components must be used: local and background. The local concentration is defined as the CO emissions from cars operating on highways in the near vicinity (i.e., distances within 100 meters) of the receptor location. The background concentration is defined by the North Carolina Department of Environment, Health and Natural Resources as "the concentration of a pollutant at a point that is the result of emissions outside the local vicinity; that is, the concentration at the upwind edge of the local sources."

In this study, the local concentration was determined by the NCDOT Traffic Noise/Air Quality Staff using line source computer modeling and the background concentration was obtained from the North Carolina Department of Environment and Natural Resources (NCDENR). Once the two concentration components were resolved, they were added together to determine the ambient CO concentration for the receptor in question and to compare to the National Ambient Air Quality Standards (NAAQS).

A microscale air quality analysis was performed to determine future CO concentrations resulting from the proposed highway improvements. "CAL3QHC - A Modeling Methodology For Predicting Pollutant Concentrations Near Roadway Intersections" was used to predict the CO concentration at the nearest sensitive receptor to the project.

The worst-case air quality receptors were determined to be along the right of way line at a distance of 13.5 meters (45 feet) from the proposed centerline of the roadway and 15.0 meters (50 feet) from the existing centerline. The predicted one-hour average CO concentrations for the evaluation build years of 2005 and 2025 are 3.8 and 4.6 ppm, respectively.

Comparison of the predicted CO concentrations with the NAAQS maximum permitted for 1-hour averaging period = 35 ppm; 8-hour averaging period = 9 ppm) indicates no violation of these standards. Since the results of the worst-case 1-hour CO analysis is less than 9 ppm, it can be concluded that the 8-hour CO level does not exceed the standard.

b. Hydrocarbons and Nitrogen Oxides

Automobiles are regarded as sources of hydrocarbons and nitrogen oxides. Hydrocarbons and nitrogen oxides emitted from cars are carried into the atmosphere where they react with sunlight to form ozone and nitrogen dioxide. Automotive emissions of HC and NO are expected to decrease in the future due to the continued installation and maintenance of pollution control devices on new cars. However, regarding area-wide emissions, these technological improvements may be offset by the increasing number of cars on the transportation facilities of the area.

The photochemical reactions that form ozone and nitrogen dioxide require several hours to occur. For this reason, the peak levels of ozone generally occur 10 to 20 kilometers (6.2 to 12.4 miles) downwind of the source of hydrocarbon emissions. Urban areas as a whole are regarded as sources of hydrocarbons, not individual streets and highways. The emissions of all sources in an urban area mix together in the atmosphere, and in the presence of sunlight, the mixture reacts to form ozone, nitrogen dioxide, and other photochemical oxidants. The best example of this type of air pollution is the smog that forms in Los Angeles, California.

c. Particulate Matter and Sulfur Dioxide

Automobiles are not regarded as significant sources of particulate matter and sulfur dioxide. Nationwide, highway sources account for less than 7 percent of particulate matter emissions and less than 2 percent of sulfur dioxide emissions. Particulate matter and sulfur dioxide emissions are predominantly the result of non-highway sources (e.g., industrial, commercial, and agricultural). Because emissions of particulate matter and sulfur dioxide from automobiles are very low, there is no reason to suspect that traffic on

the project will cause air quality standards for particulate matter and sulfur dioxide to be exceeded.

Automobiles without catalytic converters can burn regular gasoline. The burning of regular gasoline emits lead as a result of regular gasoline containing tetraethyl lead which is added by refineries to increase the octane rating of the fuel. Newer cars with catalytic converters burn unleaded gasoline eliminating lead emissions. The Clean Air Act Amendments of 1990 make the sale, supply, or transport of leaded gasoline or lead additives unlawful after December 31, 1995. Because of these reasons, it is not expected that traffic on the proposed project will cause the NAAQS for lead to be exceeded.

d. Area Attainment Status and Construction Effects

The project is located in Carteret County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Part 51 and 93 are not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

During construction of the proposed project, all materials resulting from clearing and grubbing, demolition or other operations will be removed from the project, burned or otherwise disposed of by the contractor. Any burning will be done in accordance with applicable local laws and ordinances and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520. Care will be taken to insure that burning will be done at the greatest practical distance from dwellings and not when atmospheric conditions are such as to create a hazard to the public. Burning will only be performed under constant surveillance. Also during construction, measures will be taken to reduce the dust generated by construction when the control of dust is necessary for the protection and comfort of motorists or area residents. This evaluation completes the assessment requirements for air quality of the 1990 Clean Air Act Amendments and the NEPA process, and no additional reports are necessary.

9. Traffic Noise

This analysis was performed to determine the project's effect on noise levels in the immediate project area. This investigation includes an inventory of existing noise sensitive land uses and a field survey of ambient (existing) noise levels in the study area. It also includes a comparison of the predicted noise levels and the ambient noise levels to determine if traffic noise impacts can be expected resulting from the proposed project. Traffic noise impacts are determined from the current procedures for the abatement of highway traffic noise and construction noise, appearing as Part 772 of Title 23 of the Code of Federal Regulations. If traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures must be considered for reducing or eliminating the traffic noise impacts. Additional details regarding this noise analysis are contained in the Noise Analysis Technical Report, available from NCDOT (see additional information in the Summary).

a. Characteristics Of Noise

The magnitude of noise is usually described by its sound pressure. Since the range of sound pressure varies greatly, a logarithmic scale is used to relate sound pressures to some common reference level, usually the decibel (dB). Sound pressures described in decibels are called sound pressure levels and are often defined in terms of frequency weighted scales (A, B, C, or D).

The weighted-A decibel scale is used almost exclusively in vehicle noise measurements because it places the most emphasis on the frequency range to which the human ear is most sensitive (1,000-6,000 Hertz). Sound levels measured using a weighted-A decibel scale are often expressed as dBA. Throughout this report, all noise levels will be expressed in dBA's. Several examples of noise pressure levels in dBA are listed in Appendix E, Table N1.

b. Noise Abatement Criteria

The Federal Highway Administration (FHWA) has developed Noise Abatement Criteria (NAC) and procedures to be used in the planning and design of highways to determine whether highway noise levels are or are not compatible with various land uses. These abatement criteria and procedures are set forth in the aforementioned Federal reference (Title 23 CFR Part 772). A summary of the noise abatement criteria for various land uses is presented in Appendix E, Table N2. The Leq, or equivalent sound level, is the level of constant sound which in a given situation and time period has the same energy as does time varying sound. In other words, the fluctuating sound levels of traffic noise are represented in terms of a steady noise level with the same energy content.

c. Ambient Noise Levels

Ambient noise measurements were taken in the vicinity of the project to determine ambient (existing) noise levels for the identified land uses. The purpose of this noise level information was to quantify the existing acoustic environment and to provide a base for assessing the impact of noise level increases. The existing Leq noise levels along the roadway facilities in the project area as measured at 15 meters (50 feet) ranged from 57.3 to 70.1 dBA.

d. Procedure For Predicting Future Noise Levels

The procedure used to predict future noise levels in this study was the Noise Barrier Cost Reduction Procedure, STAMINA 2.0 and OPTIMA (revised March 1983). The BCR (Barrier Cost Reduction) procedure is based upon the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The BCR traffic noise prediction model uses the number and type of vehicles on the planned roadway, their speeds, the physical characteristics of the road (curves, hills, depressed, elevated, etc.), receptor location and

height, and, if applicable, barrier type, barrier ground elevation, and barrier top elevation.

The STAMINA 2.0 computer model was utilized in order to determine the number of land uses (by type) which would be impacted during the peak hour of the design year 2025. A land use is considered to be impacted when exposed to noise levels approaching or exceeding the FHWA noise abatement criteria and/or predicted to sustain a substantial noise increase.

e. Traffic Noise Impacts And Noise Contours

Traffic noise impacts occur when the predicted traffic noise levels either: [a] approach or exceed the FHWA noise abatement criteria (with "approach" meaning within 1 dBA of the 67 dBA criteria for category B), or [b] 15 dBA increase). The NCDOT definition of substantial increase is shown in the lower portion of Appendix E, Table N2. Consideration for noise abatement measures must be given to receptors that fall in either category.

The number of receptors in each activity category for each section and alternative predicted to become impacted by future traffic noise is shown in Appendix E, Table N5. These are noted in terms of those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA NAC or by a substantial increase in exterior noise levels. Under Title 23 CFR Part 772, the noise impacts for each alternative are as follows:

- Alternative 1A – 27 receptors impacted
- Alternative 1E – 46 receptors impacted
- Alternative 2A – 28 receptors impacted
- Alternative 2D – 29 receptors impacted
- Alternative 2E – 52 receptors impacted

The maximum extent of the 72 and 67 dBA noise level contours of the identified alternatives are 26.7 and 47.4 meters (88 and 155 feet), respectively, from the center of the proposed roadway. Contour information in Table N5 shows this information by each evaluated alternative. This information should assist local authorities in exercising land use control over the remaining undeveloped lands adjacent to the roadway within local jurisdiction. For example, with the proper information on noise, the local authorities can prevent further development of incompatible activities and land uses with the predicted noise levels of an adjacent highway.

Appendix E, Table N6 exhibits the exterior traffic noise level increases for the identified receptors by each alternative and/or any subsequent connector for each roadway section. The predicted noise level increases for this project range up to +25 dBA depending on alternative selected. When real-life noises are heard, it is possible barely to detect noise level changes of 2-3 dBA. A 5 dBA change is more readily noticeable. A 10 dBA change is judged by most people as a doubling or a halving of the loudness of the

sound.

f. Traffic Noise Abatement Measures

If traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures for reducing or eliminating the noise impacts must be considered. Consideration for noise abatement measures must be given to all impacted receptors. Along each alternative, traffic noise impacts are anticipated.

1. Highway Alignment

Highway alignment selection involves the horizontal or vertical orientation of the proposed improvements in such a way as to minimize impacts and costs. The selection of alternative alignments for noise abatement purposes must consider the balance between noise impacts and other engineering and environmental parameters. For noise abatement, horizontal alignment selection is primarily a matter of siting the roadway at a sufficient distance from noise sensitive areas. The alignments for the construction alternatives have been selected to minimize environmental impacts and cost; therefore, alignment revisions strictly for noise reduction are not considered appropriate for this project.

2. Traffic System Management Measures

Traffic management measures that limit vehicle type, speed, volume and time of operations are often effective noise abatement measures. For this project, traffic management measures are not considered appropriate for noise abatement due to their effect on the capacity and level-of-service on the proposed roadway.

3. Noise Barriers

Physical measures to abate anticipated traffic noise levels are often applied with a measurable degree of success by the application of solid mass, attenuable measures to effectively diffract, absorb, and reflect highway traffic noise emissions. Solid mass, attenuable measures may include earth berms or artificial abatement walls.

Much of the proposed project will not have control of access, meaning most commercial establishments and residents will have direct access connections to the proposed roadway, and most intersections will adjoin the project at grade. Some project segments are proposed to have partial access; however, these areas do not appear to be sufficient in length for noise walls to be a viable mitigation measure. For a noise barrier to provide sufficient noise reduction it must be high enough and long enough to shield the receptor from significant sections of the highway. Access openings in the barrier severely reduce the noise reduction provided by the barrier. It then becomes economically unreasonable to construct a barrier for a small noise reduction. Safety at access openings (driveways, crossing streets, etc.) due to restricted sight distance is also a concern. Furthermore, to provide a significant noise reduction, a barrier's length would

normally be 8 times the distance from the barrier to the receptor. For example, a receptor located 15 meters (50 feet) from the barrier would normally require a barrier 120 meters (395 feet) long. An access opening of 12 meters (40 feet) (10 percent of the area) would limit its noise reduction to approximately 4 dBA. Hence, this type of control of access limits the effectiveness of the berms or noise walls as noise mitigation measures.

In addition, businesses, churches, and other related establishments located along a particular highway normally require accessibility and high visibility. Solid mass, attenuable measures for traffic noise abatement would tend to disallow these two qualities, and thus, would not be acceptable abatement measures in this case.

g. "Do Nothing" Alternative

Traffic noise impacts for the "do nothing" or "no-build" alternative were also considered. If the traffic currently using the network of roads in the project area should double within the next twenty years, future noise levels would increase in the range of 2-3 dBA. As previously noted, it is barely possible to detect noise level changes of 2-3 dBA. A 5 dBA change in noise levels is more readily noticed.

h. Construction Noise

The major construction elements of this project are expected to be earth removal, hauling, grading, and paving. General construction noise impacts, such as temporary speech interference for passers-by and those individuals living or working near the project, can be expected particularly from paving operations and from the earth moving equipment during grading operations. However, considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours, these impacts are not expected to be substantial. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

i. Summary

Traffic noise impacts are an unavoidable consequence of transportation projects especially in areas where there are not traffic noise sources. All traffic noise impacts were considered for noise mitigation. Based on these preliminary studies, traffic noise abatement is not recommended, and no noise abatement measures are proposed based on this preliminary analysis. After the selection of an alternative, noise mitigation measures could be reevaluated if changes were to occur pertaining to control of access within extended areas of the alternative. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772, and unless a major project change develops as noted, no additional noise reports will be submitted for this project.

In accordance with NCDOT Traffic Noise Abatement Policy, the Federal/State governments are not responsible for providing noise abatement measures for new

development in which building permits are issued within the noise impact area of a proposed highway after the Date of Public Knowledge. The Date of Public Knowledge of the location of a proposed highway project will be the approval date of the final NEPA document (FONSI or ROD), or the Design Public Hearing, whichever comes later. For development occurring after this public knowledge date, local governing bodies are responsible to insure that noise compatible designs are utilized along the proposed facility.

10. Geodetic Markers

The project may impact two geodetic survey markers. The N.C. Geodetic Survey will be contacted prior to construction regarding the location of survey markers. Intentional destruction of a geodetic monument is a violation of N.C. General Statute 102-4.

11. Hazardous Materials

A Geo-Environmental Impact Study was conducted to identify properties within the project area that may contain hazardous materials and result in future environmental liability if acquired. The hazards may include, but are not limited to underground storage tanks (UST's), hazardous waste sites, regulated landfills, and unregulated dump sites.

Based on a field reconnaissance survey and a file search of appropriate environmental agencies, 11 facilities were identified in the sale of petroleum products. A brief description of these sites is as follows:

Subway/ Amoco Food Shop

This facility is located in the western quadrant of the intersection of US 70 (Cedar Street) and Moore Street. Four UST's are located approximately 12.5 meters (41 feet) from the edge of pavement of Cedar Street.

Tavenier's

This facility is located in the western quadrant of Cedar Street and Orange Street. It is not known if UST's exist on this property.

Texaco Foodmart

This facility is located in the northern quadrant of Cedar Street and Orange Street. Five UST's were located near the edge of pavement of Orange Street.

Big Daddy Wesley's Bait and Tackle

This facility is located in the northern quadrant of Cedar Street and Turner Street. The facility has evidence of tank removal, and no tanks were noticed on the site at the time of the visit.

Amoco Food Shop

This facility is located in the northern quadrant of Cedar Street and Live Oak Street. Four UST's were identified on the site, and the closest tank is approximately 2.5 meters (8 feet) from the edge of pavement of Cedar Street.

Gant Food Mart

This facility is located in the southern quadrant of Live Oak Street and Fairview Road. Six UST's were identified on the site, and the closest tank is approximately 30.8 meters (101 feet) from the edge of pavement of Live Oak Street.

The Pantry (Amoco)

This facility is located in the northern quadrant of Live Oak Street and NC 101. Three UST's were identified approximately 18.3 meters (60 feet) from the edge of pavement of NC 101.

Movie House Video/ Laundromat

This facility is located in the southern quadrant of the intersection of Live Oak Street and Steele Point Road. Three vent pipes indicate the possibility of three UST's on site.

Rose Seafood Company

This facility is located in the southern quadrant of Live Oak Street and Campen Street. The site appears to be under remediation as evidenced by several ground water monitoring wells. The former pump island was identified, but no UST's were identified.

Trade Mart

This facility is located in the eastern quadrant of Live Oak Street and Wellons Road. Four UST's were identified approximately 22.6 meters (74 feet) from the edge of pavement of Live Oak Street.

Moe's Bug Shop

This facility is located in the southern quadrant of Live Oak Street and Bertram

Road. There is evidence of a UST removal and an old pump island on site.

No regulated or unregulated landfills or dumpsites exist within the project limits.
No other hazardous materials sites are known to exist.

VII. COMMENTS AND COORDINATION

A. Comments Received

The following federal, state, and local agencies were consulted during the preparation of this environmental assessment. Written comments were received from agencies noted with an asterisk (*).

- * U.S. Army Corps of Engineers
- * U.S. Coast Guard
- * U.S. Fish and Wildlife Service
- * State Clearinghouse
- * N.C. Department of Cultural Resources
- * N.C. Department of Environment and Natural Resources
- * N.C. Department of Public Instruction
- Region P Planning Agency
- Carteret County Commissioners
- * Carteret County Transportation Committee
- * Town of Beaufort

These comments and related issues, included in Appendix C, have been addressed in this document.

B. NEPA/ Section 404 Merger Process Coordination

September 30, 1998

In correspondence dated September 30, 1998, the U.S. Army Corps of Engineers concurred with the Purpose and Need (Concurrence Point 1) and the initial project Alternatives (Concurrence Point 2) (see Appendix D).

March 16, 1999

The first Project Team Meeting was held to review new alternatives and determine which alternatives to carry forward in the environmental document. The meeting participants agreed to eliminate the following alternatives from further consideration:

- Alternatives 1C and 2C place this major highway on West Beaufort Road, a residential street with a 35 mph speed limit. This would be disruptive to residents along West Beaufort Road and to businesses near NC 101 and US 70.
- Alternative 3B requires construction on new location within the Beaufort Historic District, a Section 4(f) resource. It disrupts businesses along the shoreline of

Gallants Channel and places one-way traffic from this major highway onto Pine Street, a residential street within a minority community.

- The Turner Street Connector widens the existing road within a portion of the Beaufort Historic District and relocates adjacent residences. This connector does not provide a desirable angle at the intersection with the Alternative 1 alignments.

A new idea was discussed for maintaining access to Downtown Beaufort using the existing drawbridge instead of building a new connector along Queen or Pollock Street. If the drawbridge were to remain in place, delays and backups would continue to occur, affecting the traffic flow along the new facility. Bridge maintenance costs for the drawbridge would be ongoing. Also, to maintain two-way traffic on the drawbridge, an intersection is needed with the new facility, requiring more construction in the estuarine areas near the Radio Island Causeway. Meeting participants rejected this idea since it does not meet the purpose and need of the project.

The Fish and Wildlife Service was concerned that Alternatives 2A and 2B are located in an estuarine area near Radio Island that could potentially provide habitat for the federally listed Piping Plover and Seabeach amaranth species. The DENR Division of Marine Fisheries is concerned about this area because of open Shellfishing waters. Resource agency representatives commented these alternatives should not extend any further into the sensitive waters.

Concerns were expressed about the impacts associated with Alternatives 1A, 1B, and 3A. The team members reviewed the potential impacts and decided to keep these alternatives in the project study. Several team members did not attend the meeting, so the Army Corps of Engineers agreed to coordinate with the other agency representatives and provide written concurrence on the alternatives to be carried forward in the environmental document.

September 27, 1999

In correspondence dated September 27, 1999, the U.S. Army Corps of Engineers concurred with the carrying the following alternatives forward in the environmental document (Concurrence Point 2):

- Alternatives 1A & 1B
- Alternatives 2A & 2B
- Alternative 3A
- Queen Street Connector
- Pollock Street Connector
- Two-lane, One-Way Traffic Configuration (to be addressed in the Transportation System Management Section of the environmental document)

March 16, 2000 and June 15, 2000

Project Team Meetings were held on March 16 and June 15, 2000 to discuss proposed revisions to the alternatives to carry forward (Concurrence Point 2). NCDOT proposed to replace the Queen Street and Pollock Street Connectors with a Connector using existing Turner Street for several reasons:

- The Queen and Pollock Street Connectors involve substantial community impacts, and residents have expressed strong opposition to these connectors.
- Queen and Pollock Street Connectors cross salt-marsh wetlands on new location in the vicinity of Town Creek.
- Turn lane improvements on Turner Street can be contained within the existing 66-foot right of way in the Beaufort Historic District.

The Project Team agreed with using Turner Street instead of Queen or Pollock Street. The existing culvert and portions of the Turner Street causeway will be replaced by a bridge to improve connectivity between Gallants Channel and the salt-marsh wetlands. The bridge length will be discussed in more detail after an alternative is selected.

Alternatives 1A – 1E intersect with West Beaufort Road (SR 1170) and not with Turner Street. These alternatives would access downtown Beaufort using part of West Beaufort Road and Turner Street. Appropriate upgrades to West Beaufort Road should be included for these alternatives. The Alternative 1 alignments should also provide a connection to NC 101 using West Beaufort Road.

Impacts for the Alternative 1 Alignments were reviewed to determine if these could be eliminated from further consideration. The Project Team agreed to keep these alternatives in the project study since the costs and environmental impacts have not been completely evaluated for all the alternatives.

NCDOT proposes new northern alternatives (Alternatives 1D, 1E, 2D & 2E) near NC 101 to avoid or reduce impacts to the proposed Carteret County School Expansion Site. At the request of several meeting participants, the Project Team agreed Alternatives 1E and 2E should be shifted further away to have less of an impact on the school expansion site.

Several team members were concerned about how the new alternatives would be affected by the proposed airport runway expansion and the unfunded future NC 101 Relocation (Project R-3624). The Project Team agreed these new alternatives should include provisions to connect with a future NC 101 relocation and should meet aviation requirements for the runway expansion area.

March 14, 2001

On March 14, 2001, a Merger Team Meeting was held for the subject project at the NCDOT Century Center in Raleigh. The meeting was held to discuss and reach concurrence on the alternatives to be studied in detail (Concurrence Point 2).

- The Queen Street and Pollock Street Connectors have been replaced with a three-lane connector using Existing Turner Street/ West Beaufort Road. A bridge is proposed to replace the existing culvert.
- New northern alternatives (Alternatives 1 D, 1 E, 2D & 2E) near NC 101 were added to avoid or reduce impacts to the proposed Carteret County School Expansion Site. Alternatives 1 E and 2E were shifted slightly northward to have as little impact as possible on the school expansion site.
- All the project alternatives have been reviewed with NCDOT's Division of Aviation. These alternatives meet FAA vertical clearance requirements at the runway approaches.

The Beaufort Morehead City Airport Master Plan calls for a future extension of Runway 26 to a length of 5500 feet. This runway extension will require NC 101 to be relocated with the future (unfunded) TIP Project R-3624. Two possible corridors for the NC 101 relocation were provided to the team members.

Several meeting participants asked that the concurrence form package clarify the proposed bridge types for Alternatives 2A, 2B, 2D, 2E, and 3A. In addition, the package should specify that the Turner Street/ West Beaufort Road connector includes three-lane improvements and a bridge spanning the Town Creek wetlands.

A representative from the Division of Coastal Management would not favor additional fill in the marsh along Turner Street.

The Team Members concurred with the alternatives to be studied in detail (Concurrence Point 2). The approved concurrence form is included in Appendix D.

January 15, 2004

On January 15, 2004, a Merger Team Meeting was held for the subject project at the NCDOT Highway Building in Raleigh. The meeting was held to give a status update for the project since so much time had elapsed since the last meeting. In addition, the team met to reduce the number of viable alternatives based on the newest data. Remaining alternatives would be carried forward in the merger process. The following was noted:

- The project's north limit was changed to Olga Road.

- The agencies asked NCDOT to refine the P&N to include benefits to both boat and auto traffic.
- The Merger Team agreed Alternative 3A should be eliminated based on:
 1. Taking property from the historic district, a Section 4f protected property
 2. Lower functionality than the other alternatives, due to numerous intersections and five-lane section
 3. Alternative 3A would require other upgrades sooner, i.e., a bypass in the future
 4. It is not as safe as the others, due to the 90 degree turn in the downtown area (trucks)
 5. There is no control of access, whereas the others will have full control except at intersections
- The agencies asked for more information on Environmental Justice to address a neighborhood that Alternatives 1A, 1B, 1D, 1E would affect.
- DCM noted that 1E, 2E would tie back into US 70 near the point where 2 schools, a shopping center, and the Post Office all have driveways. This is a high delay area when parents are dropping off or picking up children.
- The team agreed to eliminate Alternatives 1B, 2B, and 1D based on the following:
 1. Alternative 1B, 2B – high impacts to the school property
 2. Alternative 1D – high relocatees
- The remaining alternatives 1A, 1E, 2A, 2D and 2E will be shown at the public hearing. However, the team will receive information to compare remaining alternatives and review updated information as needed. At the next meeting, the team will discuss the following:
 1. Environmental justice
 2. CAMA wetlands
 3. Wetland sites N, O
 4. Bridging commitments
 5. Remaining alternatives

C. Other Agency Coordination Meetings

January 26, 1999 Meeting with Local Agencies

On January 26, 1999, a meeting was held at the N.C. Maritime Museum in Beaufort to discuss new alternatives for the project. Representatives from the Town of Beaufort, the Maritime Museum, the Beaufort - Morehead City Airport, Town Creek Marina, FHWA, and NCDOT attended the meeting. Much of the discussion focused on

potential impacts to the Museum site, the marina, the airport, and the West Beaufort Road community.

Museum representatives expressed concern about the new route that affects the Maritime Museum site on West Beaufort Road (Alternatives 2A and 2B). They are concerned about the traffic noise and visual impacts of a high-rise bridge so close to the proposed maritime village exhibit. These alternatives would disturb an existing conservation lab and would require a redesign of the site plan. Museum officials also indicated this site may be of historical importance for its salt pans used during the Revolutionary War.

Beaufort-Morehead City Airport representatives supported the proposed alternatives but mentioned several concerns about Alternatives 2A and 2B. These alternatives would displace aircraft from private hangars outside the airport property. Funding and space to reconstruct these hangars on the airport property is limited. Alternatives 2A and 2B may shorten one of the runways if the alternatives are closer than or at a higher elevation than existing West Beaufort Road. However, this would not likely be a major issue if Runway 08-26 were extended in the future.

A representative from Town Creek Marina was concerned about the impact of Alternatives 2A and 2B on the marina's dry dock storage building. This building holds 40 to 50 boats and is a major source of revenue for the marina. The marina would want this building to remain in place or to be moved back from the proposed highway. The marina representative also requested suitable access to be maintained to this property.

Representatives from the Town of Beaufort supported Alternatives 2A and 2B to provide a shorter high-rise bridge, resulting in potentially lower costs. These alternatives would also minimize impacts to residences in the West Beaufort Road community.

A suggestion was made to consider an alternative around the north side of the museum property, crossing two of the airport runways, and connecting with the alternatives east of NC 101. The airport representatives were not opposed to this suggestion if: (1) the impacted runways remained at least 3000 feet long, (2) the third runway was extended to 6000 feet, and (3) NC 101 was relocated to accommodate the runway extension. Because this idea would require a substantially longer high-rise bridge, would cross a larger area of sensitive marshlands, and would involve costly impacts to the airport, meeting participants did not believe this idea would be a reasonable alternative.

NCDOT representatives agreed to prepare more detailed preliminary designs for Alternatives 2A and 2B to assist the museum and marina representatives in commenting on the project's impact to these properties.

November 22, 1999 Meeting Regarding the N.C. Maritime Museum

On November 22, 1999, a meeting was held to discuss ideas for minimizing impacts to the N.C. Maritime Museum property along Gallants Channel. Representatives from the Department of Cultural Resources, N.C. Maritime Museum, Greensboro News and Record, FHWA, and NCDOT and the attended the meeting.

The northernmost project alternatives (Alternatives 2A and 2B) cross a corner of the property which is to be the future site of the N.C. Maritime Museum. Maritime Museum officials expressed the following concerns about these alternatives:

- 600 feet of deep-water frontage would be eliminated.
- An interim conservation lab and Junior Sailing facilities would be relocated.
- The site plan would be interrupted.
- A high-rise is not appropriate for the serene park-like setting.
- Access to the busy US 70 is unacceptable.
- Tall ships (taller than 65 feet) could not dock at the Museum property.

NCDOT representatives offered the following measures as possible options for minimizing the impact of Alternatives 2A and 2B on the Museum site (if either of these alternatives is selected):

- Assist the Museum in purchasing adjacent waterfront property north of the site.
- Compensate the Museum for costs associated with rotating the site plan.
- Work with the Museum's Architect to develop visual enhancements along the bridge, roadway, and Museum entrance.
- Investigate a lower bridge clearance with the Coast Guard (45 feet) to reduce visual impacts.
- Explore possible locations that may allow the Museum to host tall ships near the property.

Maritime Museum representatives have considered purchasing the adjacent 10.7-acre waterfront property owned by the Aqua 10 company. If this additional property were acquired, the Museum could rotate its site plan (approximately 14 degrees clockwise), leaving a buffer between Alternatives 2A and 2B and the Museum site. Maritime Museum and Cultural Resources representatives are willing to support Alternatives 2A and 2B if these measures are considered for the project. After selecting a preferred alternative, NCDOT will coordinate with the Museum's Architect in developing the visual enhancements and accommodating the tall ships.

Meeting participants discussed several other issues that should be considered during the project's development. The Museum's Recreational trails, to be funded using the Natural Heritage Trust, are proposed on a portion of the museum property. The land for these trails is now under the State's ownership instead of the Friends of the N.C.

Maritime Museum. A new building is to be constructed on the Museum property beside the existing conservation lab. This will most likely be a metal building that can be moved if Alternative 2A or 2B is selected for the project. Future traffic noise impacts to the Museum should be considered with Alternatives 2A and 2B. If warranted in the future, a traffic signal may be considered at the entrance to the Museum property.

D. Public Involvement

1. Citizens' Informational Workshops

July 23, 1998 Workshop

On July 23, 1998, a Citizens' Informational Workshop was held for the project at Beaufort Middle School. Approximately 200 people attended the workshop, including representatives from the Town of Beaufort, Carteret County, FHWA, and NCDOT. Representatives from NCDOT discussed the proposed improvements with citizens and received verbal and written comments concerning the project. The Beaufort Gam, the Carteret County News Times, and The Daily News in Jacksonville provided media coverage for the event.

NCDOT representatives discussed the proposed improvements with area citizens and received verbal and written comments. Sixty-five comment sheets or letters were received. These comments are summarized below.

A number of workshop participants supported a new location route along Alternatives 1A, 1B, 1C, or 1D instead of widening existing Cedar or Pine Streets through town. To these people, using a route on new location on the north side of town would be more beneficial to the town for the following reasons:

- It provides a limited access corridor with improved safety and travel speeds.
- It allows for future growth.
- It seems to have the highest potential to tie in with long range plans for NC 101 in routing truck traffic to the N.C. Port.
- It seems to have the least amount of disturbance to the downtown area.
- It would relieve congestion on Live Oak Street, especially near Beaufort Elementary School.

Those who commented on the connectors favored the Turner Street Connector in maintaining access to the waterfront, the courthouse, and the historic district. These believed the Queen Street Connector could result in more pedestrian/car accidents since it is in a more densely developed residential area.

Although many of the responses were in favor of Alternatives 1A through 1D, several were opposed to the new location routes. Those in opposition believed the new

location alternatives would be more expensive than improving existing roads. One person indicated the new location alternatives would split his family farm.

There were no responses in support of widening West Beaufort Road and Live Oak Street with Alternatives 2A and 2B. One person was opposed to these alternatives. This person believed Alternatives 2A and 2B would route traffic through developed areas and would not address the need for improving the traffic flow.

A number of people supported widening Cedar or Pine Streets and Live Oak Street in downtown Beaufort with Alternatives 3A and 3B. These participants favored improving the existing roads since there would be less new construction, no effect on the airport, and minimal environmental impacts.

Some people favored retaining and widening the existing drawbridge. Others believed the drawbridge should be permanently shut, requiring large boats to use the existing high-rise bridge over the Intracoastal Waterway. Some also suggested replacing the drawbridge with a lower 9 meter (30-foot) fixed span bridge. These citizens were concerned about visual impacts on Beaufort as well as minimizing the disruption to environmental resources and adjacent properties. Others were in support of building a new high-rise bridge beside the existing drawbridge and having restricted times for the drawbridge to open.

Several people did not support widening Cedar Street, Pine Street, or Live Oak Street. They gave the following reasons for not favoring these alternatives:

- These would not provide long-term solutions.
- Traffic Noise would increase in the most developed parts of town.
- Many residential properties would be impacted.
- There would be many driveway conflicts.
- Traffic congestion would increase in the downtown area, particularly near the courthouse and Beaufort Elementary School.

Others suggested routing the project through the airport. These individuals are opposed to the airport being so close to town and would prefer the airport to be relocated instead of community residents. They believe the airport is mainly used for local planes or for people with second homes in Beaufort. These individuals are opposed to the airport's future expansion plans, and they do not believe this small seaport village should support large aircraft.

Other people offered other alternatives or suggestions for the project. These are described as follows:

- The bridge should connect with West Beaufort Road west of the airport, extend along the perimeter of the airport to minimize disruptions to residences, and

connect with the Alternative 1 alignments near NC 101.

- The bridge should extend from the middle of Radio Island to west of the property recently purchased by the North Carolina Maritime Museum. This alternative would benefit local tourism by enabling tall ships to be docked at the Maritime Museum property.
- A tunnel should be built south of the existing bridge. This would involve a small number of relocations. A future two lane tunnel could be placed north of the first tunnel, if necessary. There would be less public resistance for a tunnel because Beaufort would not be bypassed.
- The proposed bridge should be designed to accommodate bikes. Many locals would benefit from being able to ride their bikes to the natural areas along Radio Island. The present bridge does not meet the needs of bicyclists.

Several participants were opposed to the project. These do not consider the drawbridge to be inconvenient for motorists. They suggested routing boating traffic along the Intracoastal Waterway or limiting the drawbridge opening times so that bridge would not open during the morning, noon, or evening rush hours. One person did not believe it was justified to build a new high-rise bridge 1.5 miles from an existing high-rise. Another commented that it doesn't cost \$42 million to get a workable solution in Beaufort.

November 29, 1999 Workshop

On November 29, 1999, a second Citizens' Informational Workshop was held at Beaufort Middle School. Approximately 200 people attended the workshop to discuss the proposed improvements and provide verbal and written comments concerning the project. Thirty-four comment sheets or letters were received. These comments are summarized below.

A number of participants expressed support for Alternatives 1A, 1B, 2A, or 2B. To these people, using a route on new location on the north side of town would be more beneficial to the town for the following reasons:

- The bridge is farther north to reduce congestion in the downtown area.
- These alternatives minimize impacts to minority community.
- They potentially increase the ability to carry more traffic with two routes.
- These alternatives provide a 65' bridge height to support boating tourism.
- The routes should bypass Beaufort as much as possible and provide limited access.

A number of people were concerned about how Alternatives 1A, 1B, 2A, or 2B would affect the community. Many participants were opposed to the Queen and Pollock Street Connectors because they would disrupt residents, playgrounds, the Boys and Girls Club, and a church within the black community. These were concerned about increased

congestion, noise, and a wider road dividing the neighborhood. Several others suggested allowing Turner Street, West Beaufort Road, and NC 101 to access the downtown area. Other ideas were suggested with Alternatives 1A, 1B, 2A, or 2B. These are listed below.

- These alternatives should be shifted north of the Carteret County Home to have the least effect on the proposed school expansion site.
- A highway beside the airport seems dangerous.
- A traffic light should be included at Turner St. with an access road to the Marina and to the Maritime Museum.
- The Maritime museum should be protected or compensated to purchase new land.
- Use the existing Drawbridge instead of the connectors to maintain in-town traffic.

A number of participants were opposed to the project. Some believe the proposed new lanes would further increase the current congestion in Beaufort. Others suggested welding the drawbridge shut and requiring boats to use the Morehead City high-rise bridge. A few people believe a new four-lane bridge over Gallants Channel would increase congestion and accidents at the two-lane Morehead City high-rise bridge. Another person stated the current project is too expensive.

Many other ideas were suggested for the project. These are listed below.

- The existing drawbridge should open once an hour during the morning and evening peak hours.
- A 45-foot bridge clearance should be considered.
- Alternatives 2A and 2B should end at NC101.
- A tunnel should be considered along Alternative 2A.
- Alternative 3A should allow Orange and Moore Street traffic to pass underneath the bridge.
- A double-decker bridge should be considered along Alternative 3A with one level for Beaufort and one level for US 70 east of Beaufort.
- A five-lane high-rise over the existing drawbridge should be examined, allowing turns at Pollock and Turner Streets.
- A new route should be considered through the airport that would disrupt fewer homes and businesses and avoid the Maritime Museum property.
- A new route should be considered to connect US 70 in Beaufort with Harkers Island.
- A new bridge from Harkers Island to Cedar Island should be considered.

September 14, 2000 Workshop

On September 14, 2000, a Citizens' Informational Workshop was held for the proposed project at the Beaufort Depot Building. Approximately 115 people attended the workshop, including representatives from NCDOT, Carteret County, and the Town

of Beaufort. NCDOT representatives discussed the proposed improvements with area citizens and received verbal and written comments. Forty-two comment sheets or letters were received and are summarized below.

A few participants supported Alternatives 1A or 1D which would reduce downtown traffic, extend improvements to Shell Landing Road, avoid the Maritime Museum property, or avoid the Carteret County Schools expansion site. Several people supported Alternatives 2A, 2B, 2D, or 2E to reduce downtown traffic, allow the town to grow eastward, provide a simpler high-rise bridge, or have less visual impact to the town. An access road was suggested near Copeland Road and NC 101 for a better connection to the east side of town. Others expressed support for Alternatives 1D, 1E, 2D or 2E as a second choice if Alternative 3A is not selected.

Some participants suggested keeping a bridge along Cedar Street to maintain a US 70 Business route in addition to a route on new location. This could improve access to the downtown area and eliminate the need for a Turner Street Connector. A two-lane, high-rise bridge on Cedar Street was also requested along with a three-lane or five-lane bypass using Alternatives 2A, 2B, 2D or 2E. Others supported either a drawbridge or a high-rise along Cedar Street.

Alternative 3A also gained some support by including a mid-level drawbridge with 30 feet of clearance. This alternative would reduce costs and environmental impacts, allow vessels higher than 65 feet to continue using the channel, and preserve Beaufort's small town image. Support was also noted to keep the existing drawbridge as it is or provide Alternative 3A as a second choice. Some did not agree with widening Cedar Street from four-lanes to five-lanes with this alternative.

Other alternatives or suggestions include the following:

- A bridge that fits the historic and maritime setting;
- A tunnel to prevent bridge cost overruns;
- A new route to connect with NC 101 two miles north of Beaufort;
- A new route from North River to NC 101 and from NC 101 to Havelock to bypass Beaufort, Morehead City, and Newport;
- A new route through the airport, relocating the airport six or eight miles north of Beaufort;
- A US 70 Bypass down Bridges Street in Morehead City for quicker travel to the Port;
- Interchanges at major road connections;
- A park at the existing drawbridge; and
- A bike path between Beaufort and Pivers Island Road.

Other participants were opposed to the project. Some believe the existing drawbridge should remain in place and be closed to boating traffic. Another favored opening the drawbridge only for tall ships. Others believe the project would mostly benefit the port while having a negative impact on the environment and the residents of Beaufort. Concerns were also expressed that the project may worsen the flow of traffic around Beaufort by creating bottlenecks at the two-lane Newport River Bridge and on the two-lane part of US 70 east of Shell Landing Road. Support was indicated for four-lane improvements on NC 101 along with replacing the drawbridge at the end of its life with a low-rise, four-lane fixed bridge. Another comment noted the project is not necessary.

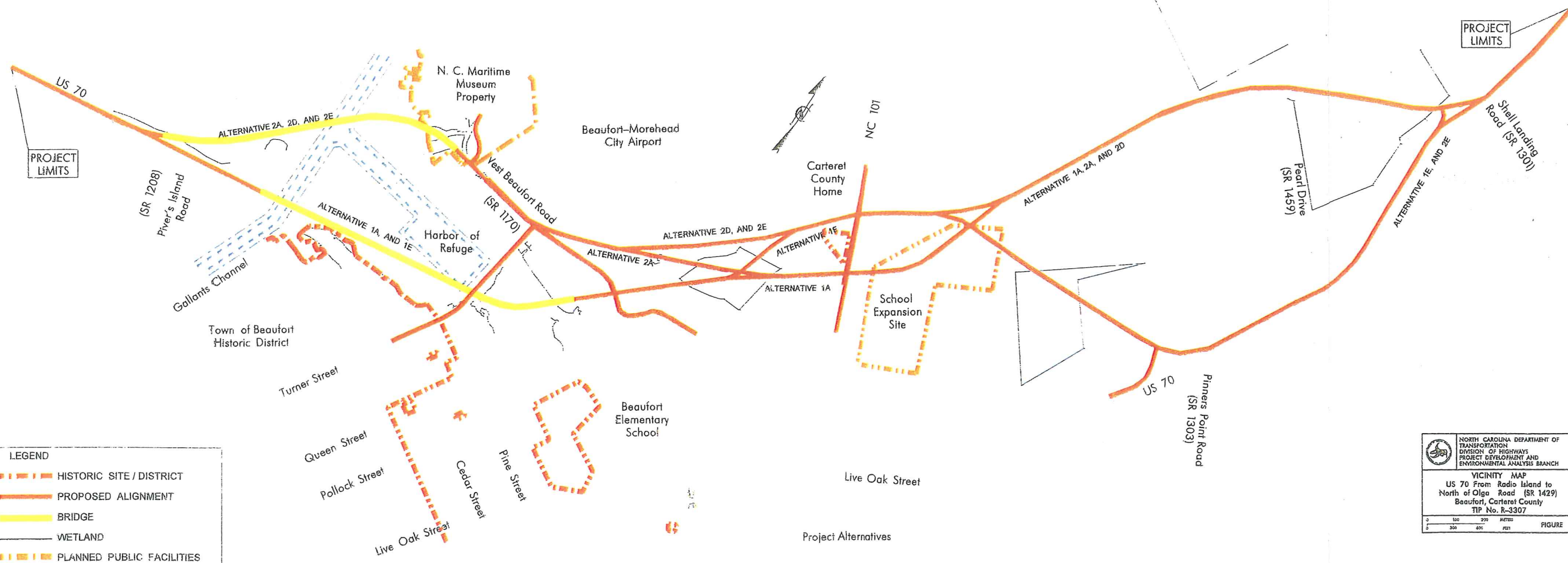
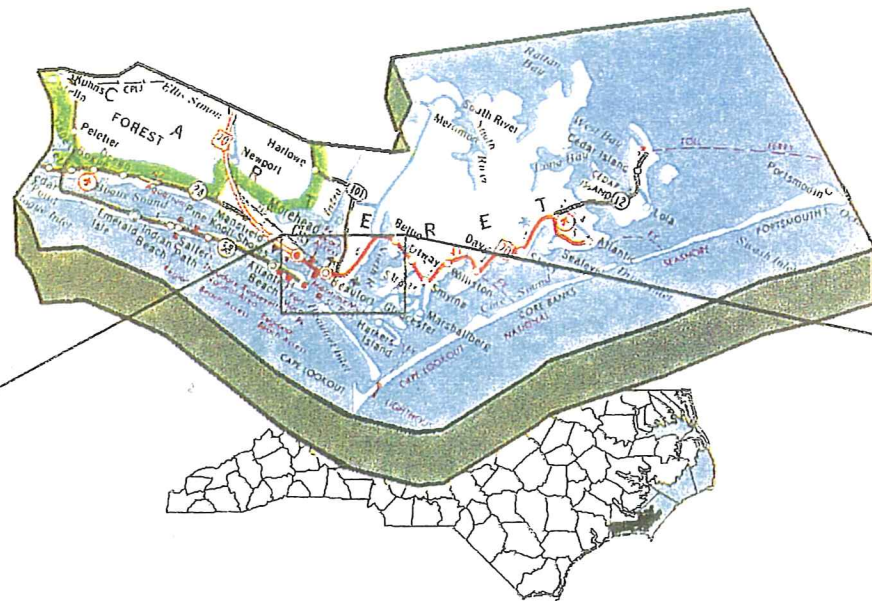
All comments were considered during the Environmental Assessment preparation.

2. Public Hearing

A public hearing will be held concerning this project following the circulation of this document. This public hearing will provide more detailed information to the public about the proposed improvements. The public will be invited to make additional comments or voice concerns regarding the proposed project.

Appendix A

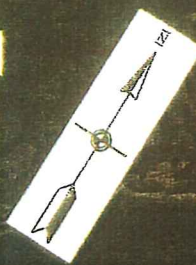
Figures



ALT 1A & 2A

BEGIN PROJECT R - 3307

US 70



Site A

Site B

Site E

Site F

Site D

Site G

BEAUFORT - MOREHEAD
CITY AIRPORT

CARTERET COUNTY
HOME

PIVER'S ISLAND RD. (SR 1208)

GALLANTS CHANNEL

Site C

Site H

WEST BEAUFORT ROAD
(SR 1170)

HARBOR OF
REFUGE

ALTERNATIVE 2A

Site K

Site L

Site M

ALTERNATIVE 1A

Site I

Site J

MOORE ST.

ORANGE ST.

TURNER STREET

TOWN OF BEAUFORT
HISTORIC DISTRICT

QUEEN STREET

POLLOCK STREET

LIVE OAK STREET

CEDAR STREET

PINE STREET

LEGEND

- HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

PROJECT ALTERNATIVES 1A & 2A

SCALE: 0 100 200 400 600 800 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT SHEET NO.: 1 OF 2 FIGURE 2A

MATCH LINE

ALT 1A & 2A

END PROJECT R - 3307

OLGA ROAD
(SR 1429)

SHELL LANDING
ROAD (SR 1307)

Site O

PEARL DRIVE (SR 1456)

PC WETLAND

ALTERNATIVE 2A
ALTERNATIVE 1A

PC WETLAND

PC WETLAND

PC WETLAND

SCHOOL
EXPANSION
SITE

CARTERET
COUNTY
MIDDLE
SCHOOL

WETLAND

Site N

US 70

WELLONS
DR.

PINNERS POINT
ROAD (SR 1303)

CARTERET COUNTY
HOME

NC 101

MATCH LINE

LEGEND

- HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

PROJECT ALTERNATIVES 1A & 2A

SCALE 0 100 200 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT SHEET NO.: 2 OF 2 FIGURE 2A

ALT 1E & 2E

BEGIN PROJECT R - 3307

US 70

Site A

ALTERNATIVE 2E

Site B

PIVER'S ISLAND RD. (SR 1208)

GALLANTS CHANNEL

MOORE ST.

ORANGE ST.

TURNER STREET

TOWN OF BEAUFORT
HISTORIC DISTRICT

QUEEN STREET

POLLOCK STREET

LIVE OAK STREET

CEDAR STREET

PINE STREET

N. C. MARITIME
MUSEUM PROPERTY

Site E

Site F

Site D

Site H

Site G

WEST BEAUFORT ROAD
(SR 1170)

Site I

Site J

Site K

Site L

Site M

BEAUFORT - MOREHEAD
CITY AIRPORT

CARTERET COUNTY
HOME

LEGEND

- HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

PROJECT ALTERNATIVES 1E & 2E

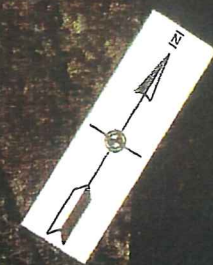
SCALE: 0 100 200 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT SHEET NO.: 1 OF 2 FIGURE 2B

MATCH LINE

ALT 1E & 2E

END PROJECT R - 3307



Site O

CARTERET COUNTY HOME

NC 101

PC WETLAND

PC WETLAND

PC WETLAND

PC WETLAND

PEARL DRIVE (SR 1456)

ALTERNATIVE 2E

ALTERNATIVE 1E

SHELL LANDING ROAD (SR 1301)

OLGA ROAD (SR 1429)

SCHOOL EXPANSION SITE

CARTERET COUNTY MIDDLE SCHOOL

WETLAND

Site N

US 70

WELLONS DR.

PINNERS POINT ROAD (SR 1303)

MATCH LINE

LEGEND

- - - - - HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

PROJECT ALTERNATIVES 1E & 2E

SCALE: 0 100 200 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT SHEET NO.: 2 OF 2 FIGURE 2B

ALTERNATIVE 2D

BEGIN PROJECT R - 3307

US 70

Site A

Site B

Site D

Site E

Site F

Site G

Site H

Site C

Site I

Site J

Site K

Site L

Site M

N. C. MARITIME
MUSEUM PROPERTY

BEAUFORT - MOREHEAD
CITY AIRPORT

CARTERET COUNTY
HOME

PIVER'S ISLAND RD. (SR 1208)

GALLANTS CHANNEL

MOORE ST.

ORANGE ST.

TURNER STREET

TOWN OF BEAUFORT
HISTORIC DISTRICT

QUEEN STREET

POLLOCK STREET

LIVE OAK STREET

CEDAR STREET

PINE STREET

HARBOR OF
REFUGE

LEGEND

- HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

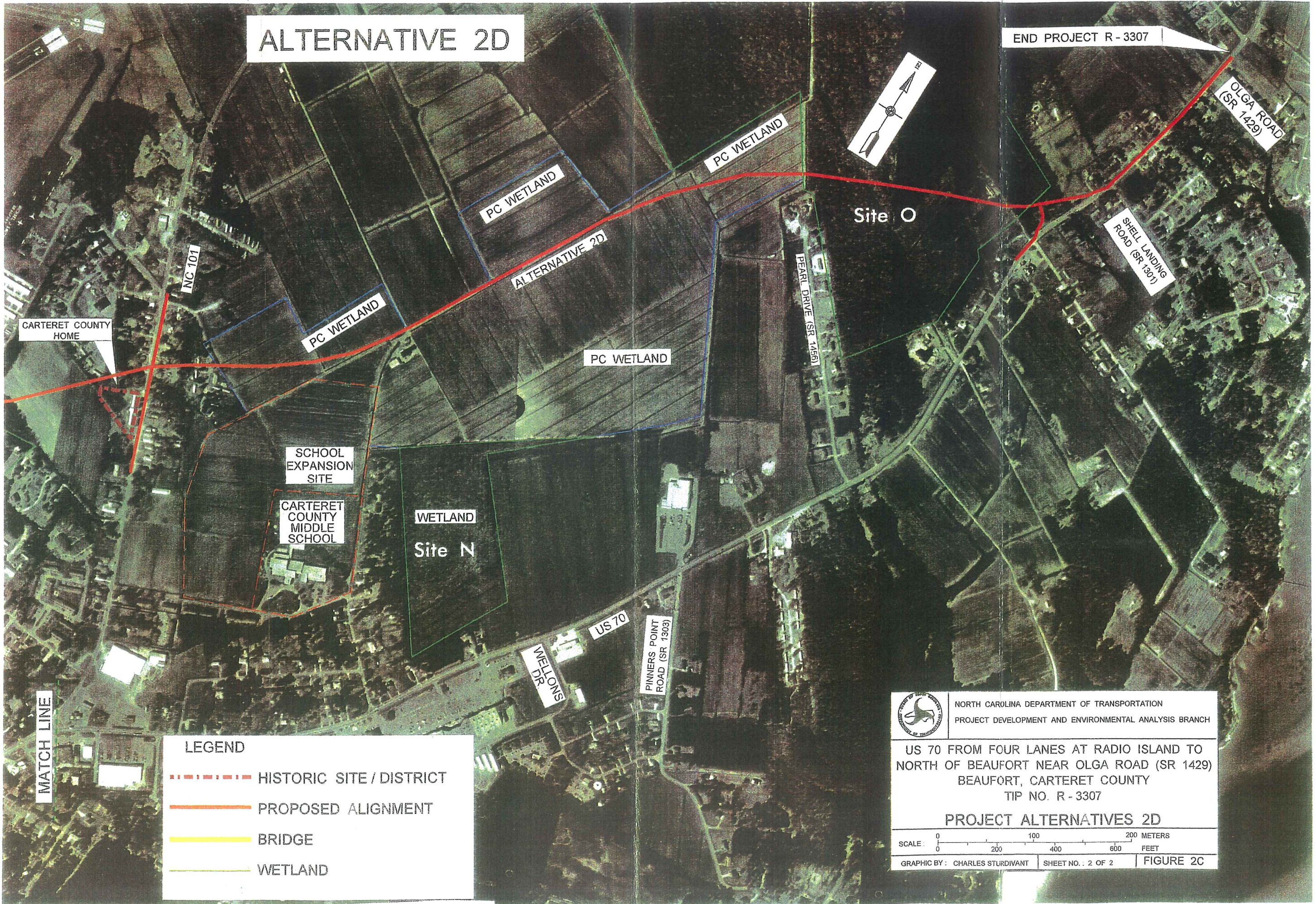
PROJECT ALTERNATIVES 2D

SCALE: 0 100 200 400 600 800 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT SHEET NO.: 1 OF 2 FIGURE 2C


MATCH LINE

ALTERNATIVE 2D



LEGEND

- HISTORIC SITE / DISTRICT
- PROPOSED ALIGNMENT
- BRIDGE
- WETLAND



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 70 FROM FOUR LANES AT RADIO ISLAND TO
NORTH OF BEAUFORT NEAR OLGA ROAD (SR 1429)
BEAUFORT, CARTERET COUNTY
TIP NO. R - 3307

PROJECT ALTERNATIVES 2D

SCALE: 0 100 200 METERS
0 200 400 600 FEET

GRAPHIC BY: CHARLES STURDIVANT | SHEET NO.: 2 OF 2 | **FIGURE 2C**

NCDOT



Conceptual Rendering

TIP# R-3307

US 70 in Beaufort, NC

Alternative 1A, and 1E

FIGURE 3A

DOWNTOWN BEAUFORT



NCDOT



Conceptual Rendering

TIP# R-3307

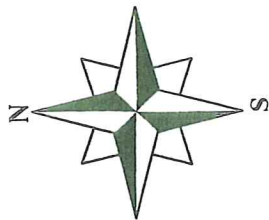
US 70 in Beaufort, NC

Alternative 2A, 2D and 2E

FIGURE 3B

DOWNTOWN BEAUFORT

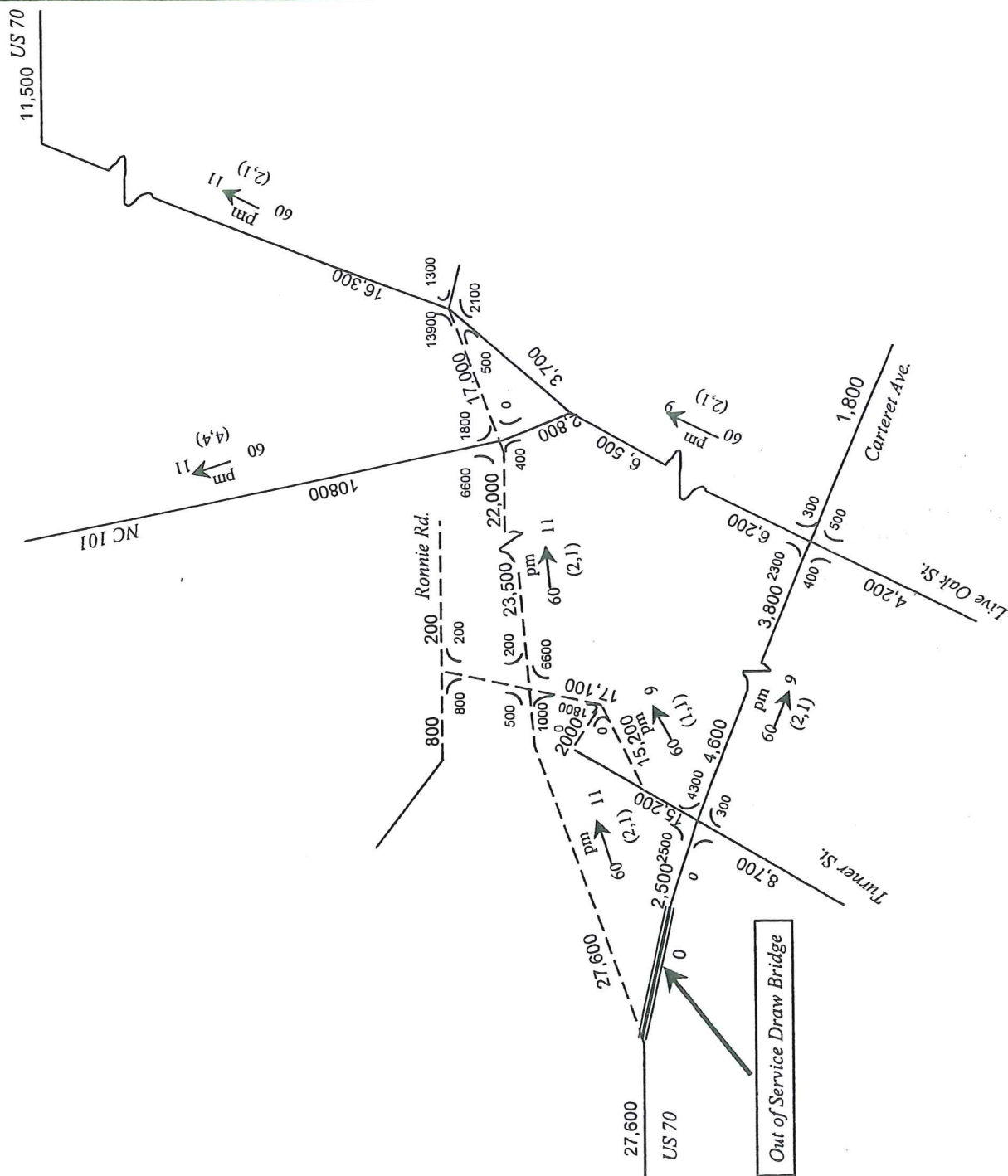
**US 70 from Radio Island
to North of SR 1429
Alternatives 1A, 1E, 2A, 2D, 2E**



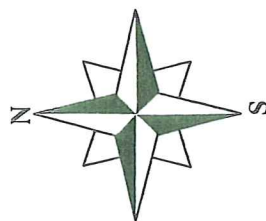
0000 = vpd
 DHV = Design Hourly Volume (%)
 D = Direction, Flow (%)
 AM/PM = AM or PM Peak
 = Direction of D
 (2,1) Dual Trucks, TTST (%)

pm
60 → 11
D DHV
(2,1)
Not to Scale

FIGURE 4A



**US 70 from Radio Island
to North of SR 1429
Alternatives 1A, 1E, 2A, 2D, 2E**

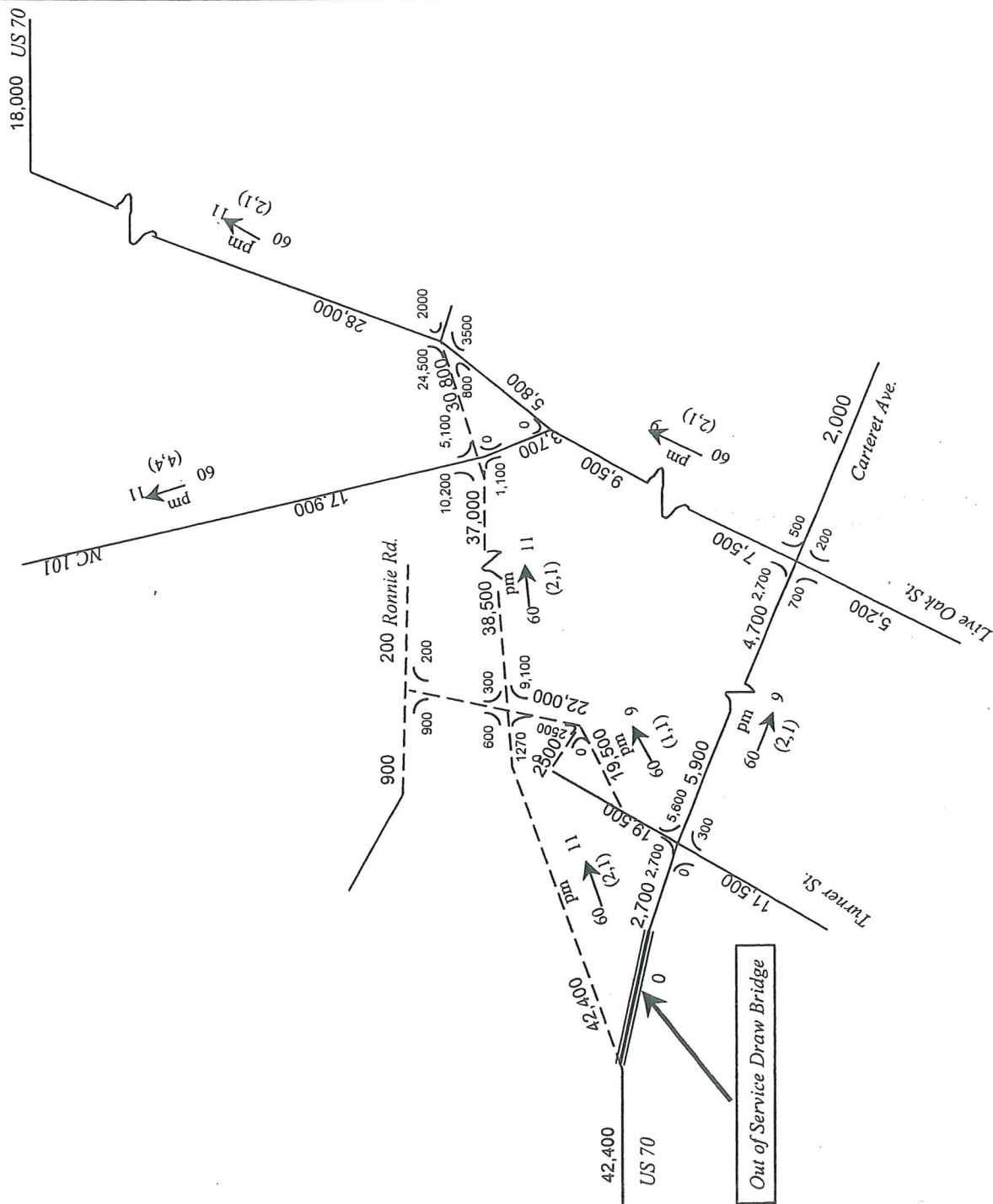


0000 = vpd
 DHV = Design Hourly Volume (%)
 D = Direction Flow (%)
 AM/PM = AM or PM Peak
 = Direction of D
 (2,1) Dual Trucks, TTST (%)

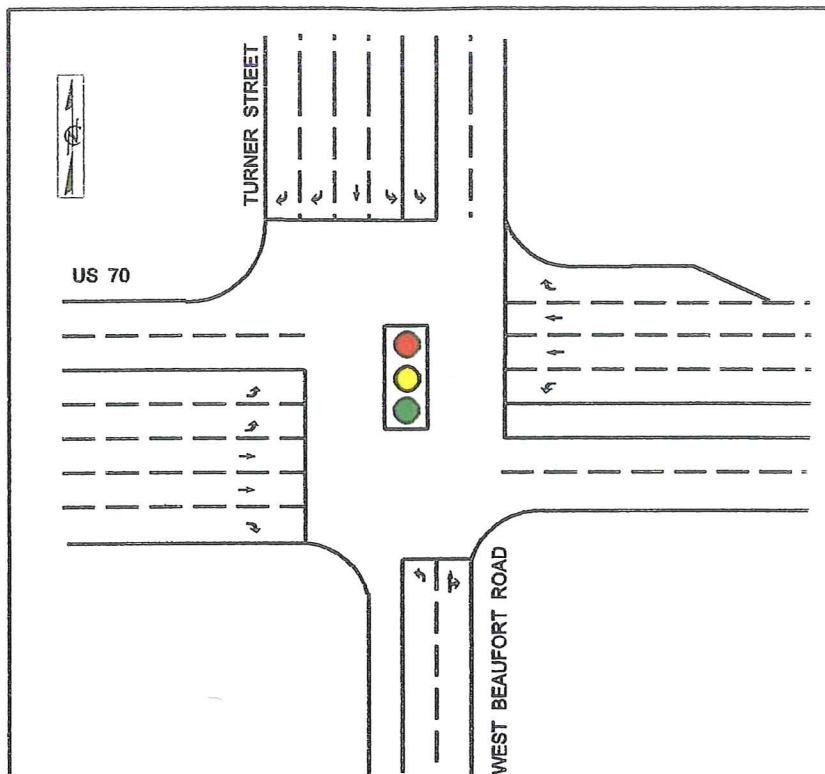
pm 11
60
D
DHV
(2,1)

Not to Scale

FIGURE 4B



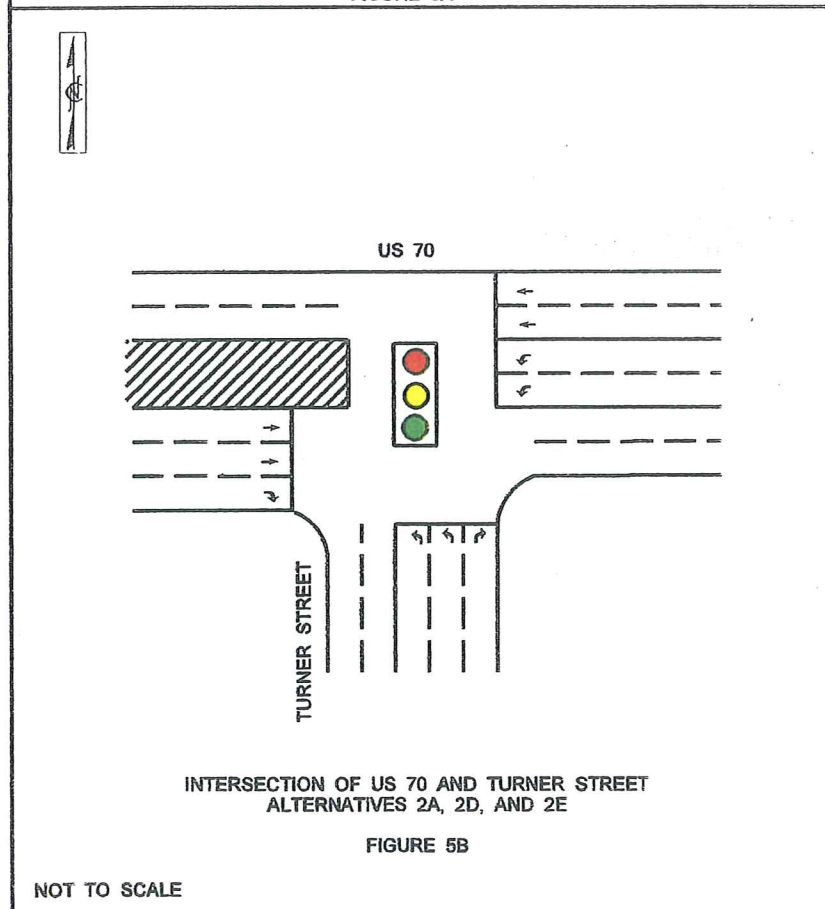
PROPOSED INTERSECTION CONFIGURATIONS TIP PROJECT U - 3307



INTERSECTION OF US 70 AND TURNER ST.
AND WEST BEAUFORT RD.
ALTERNATIVES 1A, AND 1E

NOT TO SCALE

FIGURE 5A

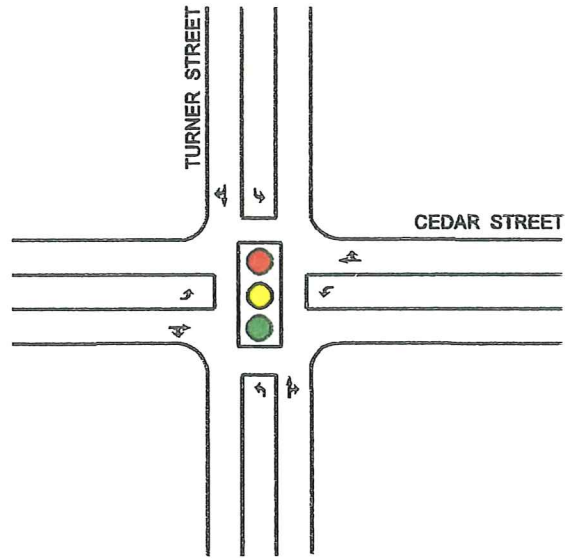


INTERSECTION OF US 70 AND TURNER STREET
ALTERNATIVES 2A, 2D, AND 2E

FIGURE 5B

NOT TO SCALE

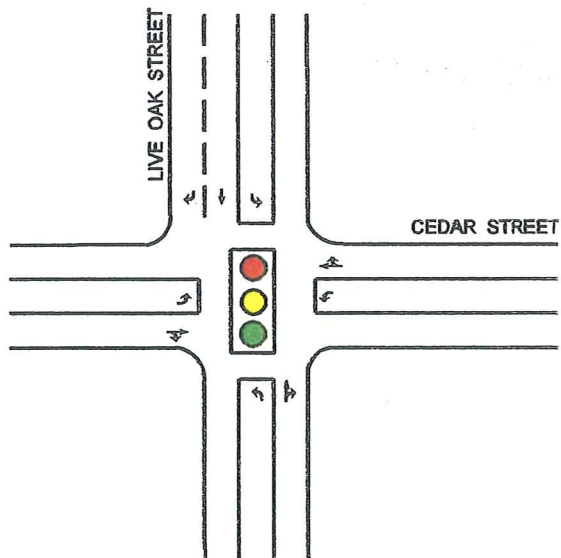
PROPOSED INTERSECTION CONFIGURATIONS
TIP PROJECT U - 3307



INTERSECTION OF TURNER ST. AND CEDAR ST.
ALTERNATIVES 1A, 1E, 2A, 2D, AND 2E

FIGURE 5C

NOT TO SCALE

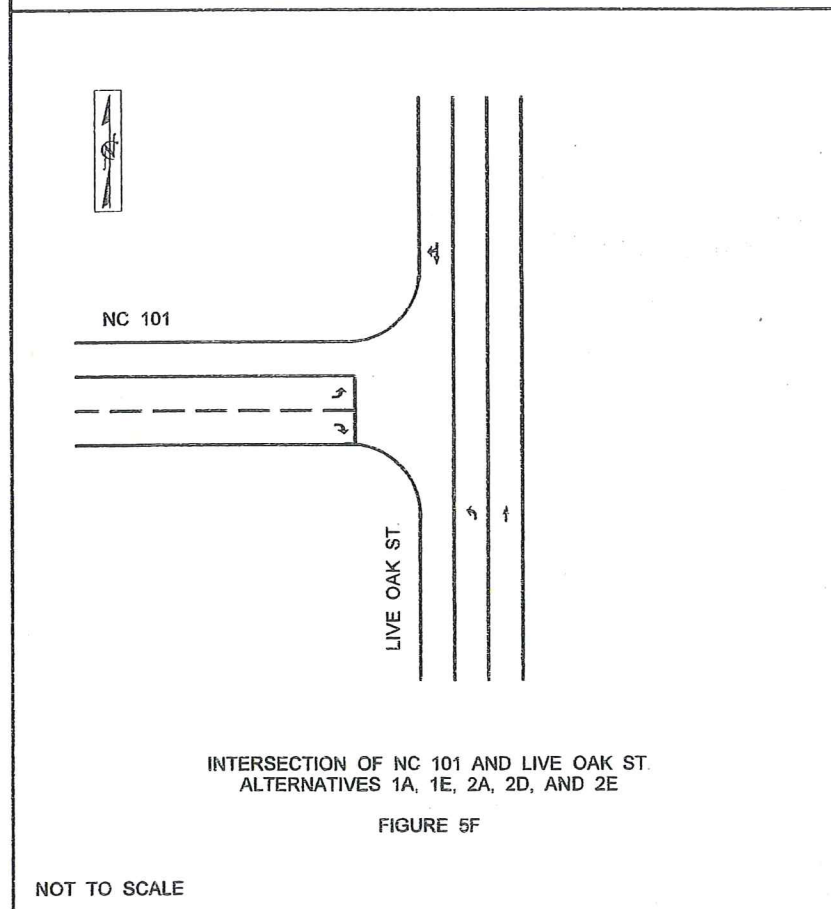
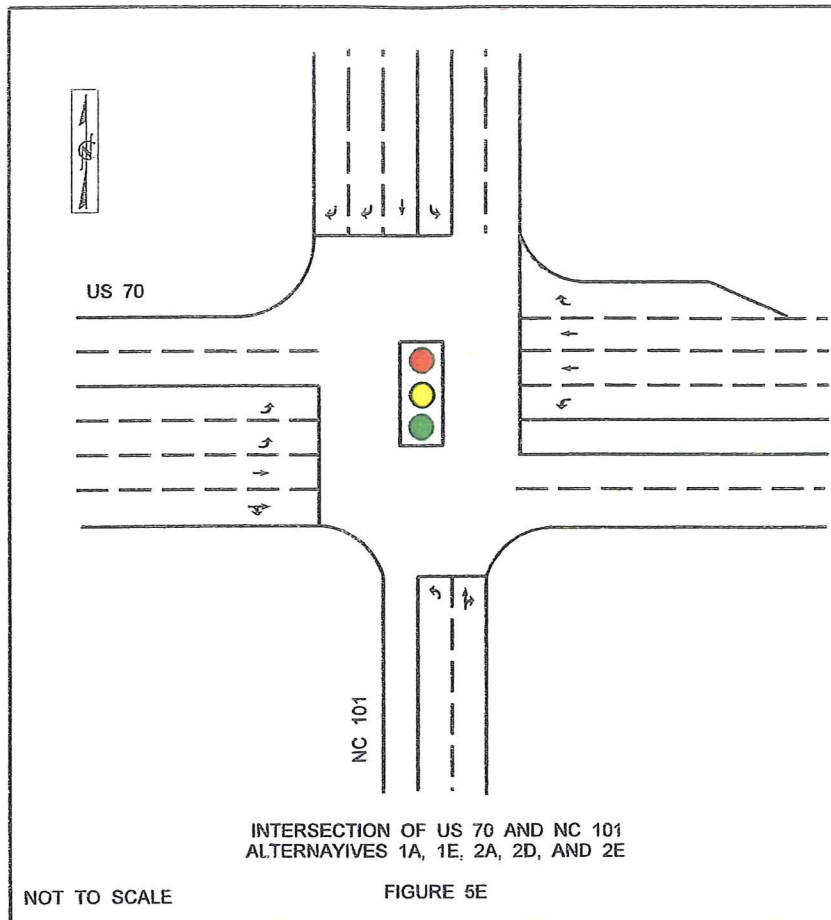


INTERSECTION OF CEDAR ST. AND LIVE ORK ST.
ALTERNATIVES 1A, 1E, 2A, 2D, AND 2E

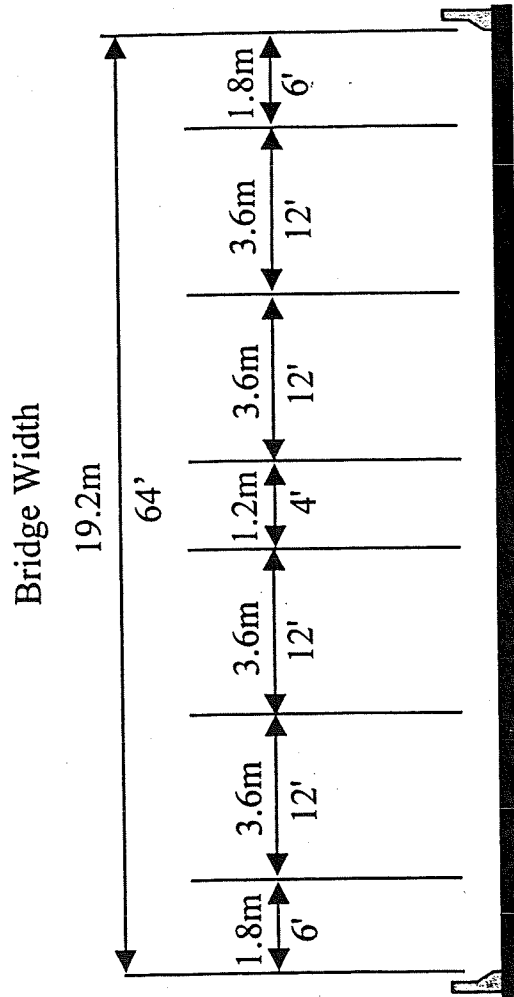
FIGURE 5D

NOT TO SCALE

PROPOSED INTERSECTION CONFIGURATIONS
TIP PROJECT U - 3307



FOUR-LANE BRIDGE SECTION



ALTERNATIVES 1A, 1E, 2A, 2D & 2E

FIGURE 6A

FOUR LANE DIVIDED SECTION WITH SHOULDER AND RAISED MEDIAN

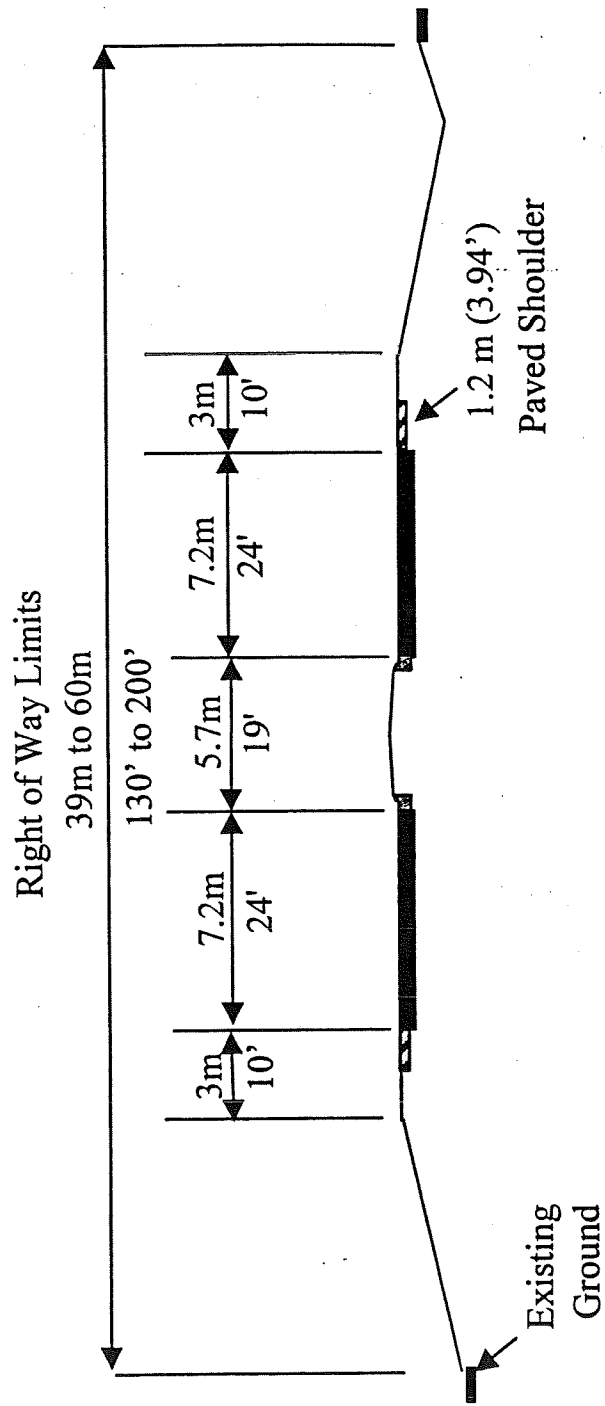


FIGURE 6B

FOUR-LANE DIVIDED SECTION WITH CURB AND GUTTER

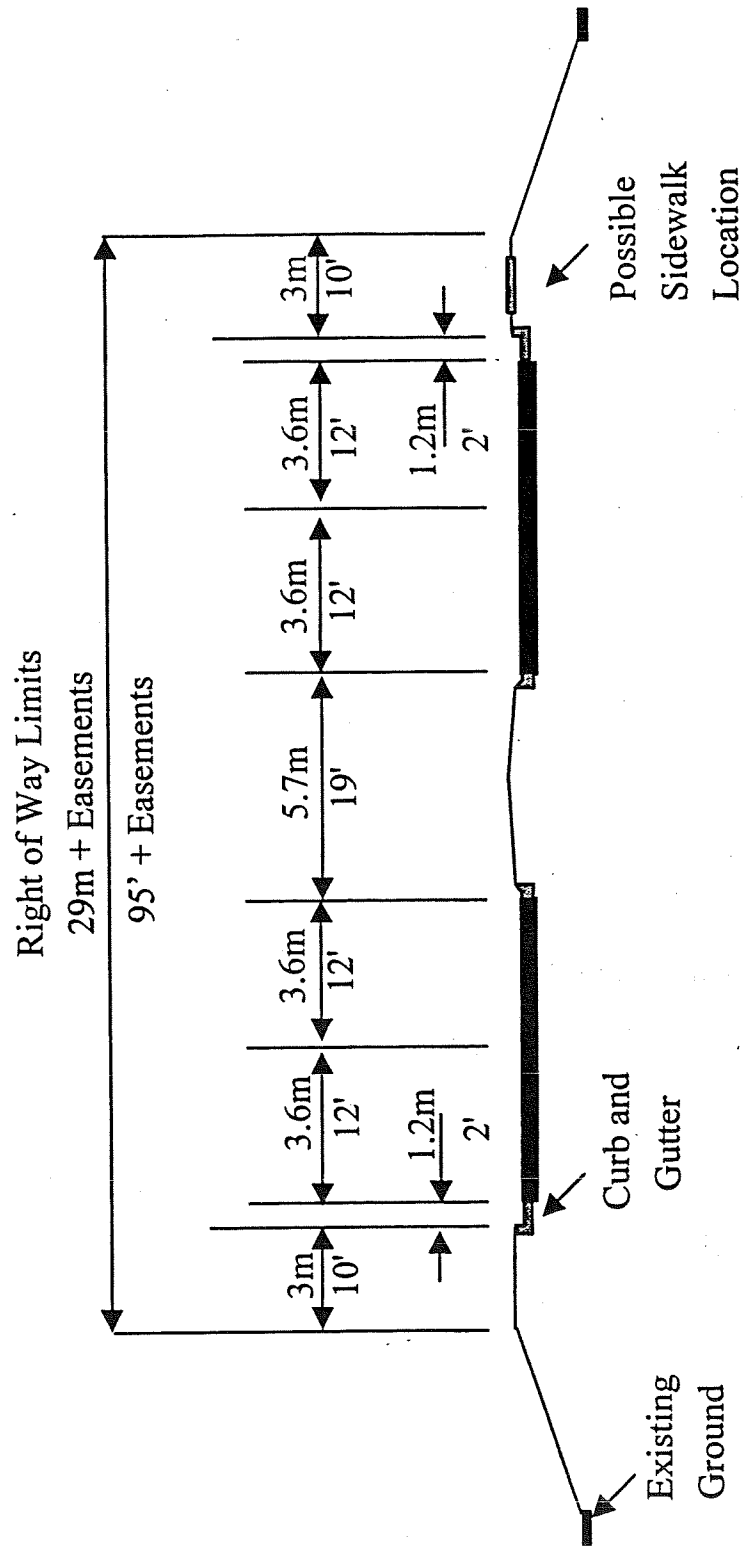
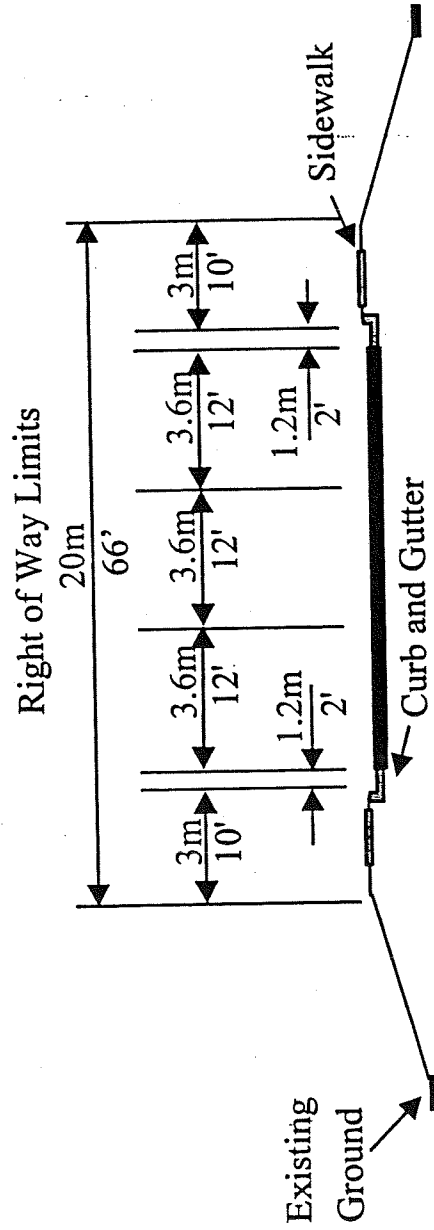



FIGURE 6C

THREE-LANE SECTION WITH CURB AND GUTTER



TURNER STREET CONNECTOR BEAUFORT ROAD REALIGNMENT

FIGURE 6D



Appendix B

Relocation Report

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	1E	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinner's Point Road (SR 1303)						

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	49	10	59	12	--	10	31	18	--
Businesses	4	0	4	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE		
Farms					Owners		Tenants		For Sale
Non-Profit	1	0	1	0	0-20M		\$ 0-150		For Rent

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	<input checked="" type="checkbox"/>	1. Will special relocation services be necessary?
<input checked="" type="checkbox"/>		2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>		3. Will business services still be available after project?
<input checked="" type="checkbox"/>		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
<input checked="" type="checkbox"/>		5. Will relocation cause a housing shortage?
<input checked="" type="checkbox"/>		6. Source for available housing (list).
<input checked="" type="checkbox"/>		7. Will additional housing programs be needed?
<input checked="" type="checkbox"/>		8. Should Last Resort Housing be considered?
<input checked="" type="checkbox"/>		9. Are there large, disabled, elderly, etc. families?
<input checked="" type="checkbox"/>		10. Will public housing be needed for project?
<input checked="" type="checkbox"/>		11. Is public housing available?
<input checked="" type="checkbox"/>		12. Is it felt there will be adequate DSS housing available during relocation period?
<input checked="" type="checkbox"/>		13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>		14. Are suitable business sites available (list source).
<input checked="" type="checkbox"/>		15. Number months estimated to complete RELOCATION?
		18 Months

0-20M	20-40M	40-70M	70-100M	100 UP	TOTAL
--	5	20	15	9	49
\$ 0-150	150-250	250-400	400-600	600 UP	
--	10	--	--	--	10
0-20M	20-40M	40-70M	70-100M	100 UP	
--	5	23	31	147	206
\$ 0-150	150-250	250-400	400-600	600 UP	
--	--	9	16	47	72

REMARKS (Respond by Number)

All residential displacees are counted as families.

2. Hero 248 F.A.M. Masonic Lodge - medium - 75 members

3. There is an ample supply of business sites available in the area.

4. a) T. D. Eure Marine Construction - small - 25 employees
b) Homer Smith Seafood - medium - 50 employees
c) Omar Sailmakers - small - 10 employees
d) Laughton's Garage, Inc. - small - 10 employees

6 & 14. MLS, newspaper, individuals

8. As mandated by State Law

11. Carteret County

12. Or built if necessary

 G. Alton Glover Relocation Agent		04/25/01 Date	 Approved by	5/4/01 Date
--	--	------------------	---	----------------

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	1A	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinner's Point Road (SR 1303)						

ESTIMATED DISPLACEDS					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	20	17	37	6	--	17	18	2	--
Businesses	3	0	3	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE		
Farms					Owners		Tenants		
Non-Profit	1	0	1	0	0-20M		\$ 0-150		
					20-40M		150-250		
					40-70M		250-400		
					70-100M		400-600		
					100 UP		600 UP		
					TOTAL		20		
							17		
							206		
							72		

ANSWER ALL QUESTIONS		Explain all "YES" answers.
Yes	No	
	X	1. Will special relocation services be necessary?
X		2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
X		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
X		15. Number months estimated to complete RELOCATION? 18 Months

REMARKS (Respond by Number 203)

All residential displacees are counted as families.

2. Hero 248 F.A.M. Masonic Lodge - medium - 75 members

3. There is an ample supply of business sites available in the area.

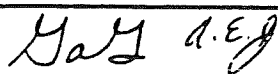

4. a) T. D. Eure Marine Construction - small - 25 employees
b) Homer Smith Seafood - medium - 50 employees
c) Omar Sailmakers - small - 10 employees

6 & 14. MLS, newspaper, individuals

8. As mandated by State Law

11. Carteret County

12. Or built if necessary

 G. Alton Glover Relocation Agent	04/25/01 Date	 Approved by	5/4/01 Date
--	------------------	---	----------------

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	2B	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinners Point Road (SR 1303)						

ESTIMATED DISPLACED

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	15	3	18	2
Businesses	3	0	3	0
Farms				
Non-Profit				

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
--	3	15	--	--

VALUE OF DWELLING		DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale	For Rent
0-20M	--	\$ 0-150	--	0-20M	\$ 0-150
20-40M	--	150-250	3	20-40M	5
40-70M	10	250-400	--	40-70M	23
70-100M	5	400-600	--	70-100M	31
100 UP	--	600 UP	--	100 UP	147
TOTAL	15		3		206

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	<input checked="" type="checkbox"/>	1. Will special relocation services be necessary?
	<input checked="" type="checkbox"/>	2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>		3. Will business services still be available after project?
<input checked="" type="checkbox"/>		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	<input checked="" type="checkbox"/>	5. Will relocation cause a housing shortage?
<input checked="" type="checkbox"/>		6. Source for available housing (list).
	<input checked="" type="checkbox"/>	7. Will additional housing programs be needed?
<input checked="" type="checkbox"/>		8. Should Last Resort Housing be considered?
	<input checked="" type="checkbox"/>	9. Are there large, disabled, elderly, etc. families?
	<input checked="" type="checkbox"/>	10. Will public housing be needed for project?
<input checked="" type="checkbox"/>		11. Is public housing available?
<input checked="" type="checkbox"/>		12. Is it felt there will be adequate DSS housing available during relocation period?
	<input checked="" type="checkbox"/>	13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>		14. Are suitable business sites available (list source).
<input checked="" type="checkbox"/>		15. Number months estimated to complete RELOCATION? 15 Months

REMARKS (Respond by Number)

All residential displacees are counted as families.
 3. There is an ample supply of business sites available in the area.
 4. a) T. D. Eure Marine Construction – small – 25 employees
 b) The Handlebar – small – 5 employees
 c) One Cut Above – small – 5 employees
 6 & 14. MLS, newspaper, individuals
 8. As mandated by State Law
 11. Carteret County
 12. Or built if necessary

G. Alton Glover
G. Alton Glover
Relocation Agent

04/25/01
Date

D. R. White
Approved by

5/4/01
Date

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	1D	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinnars Point Road (SR 1303)						

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	43	10	53	12
Businesses	4	0	4	0
Farms				
Non-Profit	1	0	1	0

INCOME LEVEL

0-15M		15-25M		25-35M		35-50M		50 UP	
--		10		25		18		--	
VALUE OF DWELLING				DSS DWELLING AVAILABLE					
Owners		Tenants		For Sale			For Rent		
0-20M	--	\$ 0-150	--	0-20M	--	\$ 0-150	--		
20-40M	--	150-250	10	20-40M	5	150-250	--		
40-70M	18	250-400	--	40-70M	23	250-400	9		
70-100M	25	400-600	--	70-100M	31	400-600	16		
100 UP	--	600 UP	--	100 UP	147	600 UP	47		
TOTAL	43		10		206				72

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
X		2. Will schools or churches be affect by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
X		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
X		15. Number months estimated to complete RELOCATION? 18 Months

REMARKS (Respond by Number)

All residential displacees are counted as families.
 2. Hero 248 F.A.M. Masonic Lodge – medium – 75 members
 3. There is an ample supply of business sites available in the area.
 4. a) T. D. Eure Marine Construction – small – 25 employees
 b) Homer Smith Seafood – medium – 50 employees
 c) Omar Sailmakers– small – 10 employees
 d) Laughton's Garage, Inc. – small – 10 employees
 6 & 14. MLS, newspaper, individuals
 8. As mandated by State Law
 11. Carteret County
 12. Or built if necessary

G. Alton Glover

G. Alton Glover
Relocation Agent

04/25/01
Date

D. R. Vining

Approved by

5/4/01

Date

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	2E	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinner's Point Road (SR 1303)						

ESTIMATED DISPLACED

INCOME LEVEL

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	20	4	24	6
Businesses	3	0	3	0
Farms				
Non-Profit				

0-15M	15-25M	25-35M	35-50M	50 UP
--	--	9	15	--

VALUE OF DWELLING

DSS DWELLING AVAILABLE

Owners		Tenants		For Sale		For Rent	
0-20M	--	\$ 0-150	--	0-20M	--	\$ 0-150	--
20-40M	--	150-250	4	20-40M	5	150-250	--
40-70M	5	250-400	--	40-70M	23	250-400	9
70-100M	15	400-600	--	70-100M	31	400-600	16
100 UP	--	600 UP	--	100 UP	147	600 UP	47
TOTAL	20		4		206		72

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	<input checked="" type="checkbox"/>	1. Will special relocation services be necessary?
	<input checked="" type="checkbox"/>	2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>		3. Will business services still be available after project?
<input checked="" type="checkbox"/>		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	<input checked="" type="checkbox"/>	5. Will relocation cause a housing shortage?
<input checked="" type="checkbox"/>		6. Source for available housing (list).
	<input checked="" type="checkbox"/>	7. Will additional housing programs be needed?
<input checked="" type="checkbox"/>		8. Should Last Resort Housing be considered?
	<input checked="" type="checkbox"/>	9. Are there large, disabled, elderly, etc. families?
	<input checked="" type="checkbox"/>	10. Will public housing be needed for project?
<input checked="" type="checkbox"/>		11. Is public housing available?
<input checked="" type="checkbox"/>		12. Is it felt there will be adequate DSS housing available during relocation period?
	<input checked="" type="checkbox"/>	13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>		14. Are suitable business sites available (list source).
<input checked="" type="checkbox"/>		15. Number months estimated to complete relocation?
		15 Months

REMARKS (Respond by number)

All residential displacees are counted as families.
 3. There is an ample supply of business sites available in the area.
 4. a) T. D. Eure Marine Construction - small - 25 employees
 b) The Handlebar - small - 5 employees
 c) One Cut Above - small - 5 employees
 6 & 14. MLS, newspaper, individuals
 8. As mandated by State Law
 11. Carteret County
 12. Or built if necessary

G. Alton Glover
Relocation Agent

04/25/01
Date

D.R. Vick
Approved by

5/4/01
Date

Original & 1 Copy: State Relocation Agent
2 Copy: Area Relocation Office

North Carolina Department of Transportation
AREA RELOCATION OFFICE

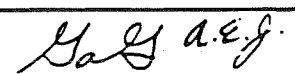
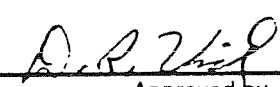
☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	2A	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinner's Point Road (SR 1303)						

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	15	4	19	2	--	4	15	--	--
Businesses	3	0	3	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE		
Farms					Owners		Tenants		
Non-Profit					For Sale		For Rent		
					0-20M	--	\$ 0-150	--	\$ 0-150
					20-40M	--	150-250	4	20-40M
					40-70M	10	250-400	--	40-70M
					70-100M	5	400-600	--	70-100M
					100 UP	--	600 UP	--	100 UP
					TOTAL	15		4	206

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
X		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
X		15. Number months estimated to complete RELOCATION? 15 Months

REMARKS (Respond by number)	
All residential displacees are counted as families.	
3. There is an ample supply of business sites available in the area.	
4. a) T. D. Eure Marine Construction - small - 25 employees b) Homer Smith Seafood - medium - 50 employees c) Omar Sailmakers - small - 10 employees	
6 & 14. MLS, newspaper, individuals	
8. As mandated by State Law	
11. Carteret County	
12. Or built if necessary	

 G. Alton Glover Relocation Agent		04/25/01 Date	 Approved by	5/4/01 Date
--	--	------------------	---	----------------

North Carolina Department of Transportation
AREA RELOCATION OFFICE☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	2D	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinnars Point Road (SR 1303)						

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	26	8	34	6	--	--	8	26	--
Businesses	3	0	3	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE		
Farms					Owners		Tenants		For Sale
Non-Profit					0-20M		\$ 0-150		For Rent
					20-40M		150-250		
					40-70M		250-400		
					70-100M		400-600		
					100 UP		600 UP		
					TOTAL		206		

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	<input checked="" type="checkbox"/>	1. Will special relocation services be necessary?
	<input checked="" type="checkbox"/>	2. Will schools or churches be affected by displacement?
<input checked="" type="checkbox"/>		3. Will business services still be available after project?
<input checked="" type="checkbox"/>		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	<input checked="" type="checkbox"/>	5. Will relocation cause a housing shortage?
<input checked="" type="checkbox"/>		6. Source for available housing (list).
<input checked="" type="checkbox"/>		7. Will additional housing programs be needed?
<input checked="" type="checkbox"/>		8. Should Last Resort Housing be considered?
<input checked="" type="checkbox"/>		9. Are there large, disabled, elderly, etc. families?
<input checked="" type="checkbox"/>		10. Will public housing be needed for project?
<input checked="" type="checkbox"/>		11. Is public housing available?
<input checked="" type="checkbox"/>		12. Is it felt there will be adequate DSS housing available during relocation period?
<input checked="" type="checkbox"/>		13. Will there be a problem of housing within financial means?
<input checked="" type="checkbox"/>		14. Are suitable business sites available (list source).
<input checked="" type="checkbox"/>		15. Number months estimated to complete RELOCATION? 18 Months

VALUE OF DWELLING		DSS DWELLING AVAILABLE	
Owners	Tenants	For Sale	For Rent
0-20M	--	\$ 0-150	--
20-40M	--	150-250	--
40-70M	--	250-400	9
70-100M	26	400-600	16
100 UP	--	600 UP	47
TOTAL	26	8	72

REMARKS (Respond by Number)	
All residential displacees are counted as families.	
3. There is an ample supply of business sites available in the area.	
4. a) T. D. Eure Marine Construction – small – 25 employees	
b) The Handlebar – small – 5 employees	
c) One Cut Above – small – 5 employees	
6 & 14. MLS, newspaper, individuals	
8. As mandated by State Law	
11. Carteret County	
12. Or built if necessary	

<i>G. Alton Glover</i>		<i>D.R. 769</i>	<i>5/4/01</i>
G. Alton Glover	04/25/01	Approved by	Date
Relocation Agent	Date		

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.1162501	COUNTY	Carteret	Alternate	3A	of	11	Alternate
I.D. NO.:	R-3307	F.A. PROJECT	STPNHF-70 (43)					
DESCRIPTION OF PROJECT:		US 70 from Four Lanes at Radio Island to North of Pinners Point Road (SR 1303)						

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	24	4	28	6
Businesses	14	0	14	0
Farms				
Non-Profit	1	0	1	0

INCOME LEVEL

0-15M		15-25M		25-35M		35-50M		50 UP	
--		--		--		20		4	
VALUE OF DWELLING				DSS DWELLING AVAILABLE					
Owners		Tenants		For Sale		For Rent			
0-20M	--	\$ 0-150	--	0-20M	--	\$ 0-150	--		
20-40M	--	150-250	4	20-40M	5	150-250	--		
40-70M	10	250-400	--	40-70M	23	250-400	9		
70-100M	14	400-600	--	70-100M	31	400-600	16		
100 UP	--	600 UP	--	100 UP	147	600 UP	47		
TOTAL		24		4		206			72

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
X		2. Will schools or churches be affect by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
X		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
X		15. Number months estimated to complete RELOCATION? 18 Months

REMARKS (Respond by Number)

- All residential displacees are counted as families.
- Hero 248 F.A.M. Masonic Lodge – medium – 75 members
 - There is an ample supply of business sites available in the area.
 - a) Homer Smith Seafood – small – 25 employees
b) Amoco Food Shop – small – 5 employees
c) Hardee's – medium – 30 employees
d) Wally's Auto Sales – small – 5 employees
e) Texaco – small – 5 employees
f) Smith Auto Care – small – 4 employees
g) Hallett S. Ward, Attorney at Law – small – 6 employees
h) ABC Store – small – 4 employees
i) Two Cousins Consignment Shop – small – 4 employees
j) Hugh C. Talton, Attorney at Law – small – 4 employees
k) Hamiltons Furniture & Appliance - small – 8 employees
l) Hamilton Whirlpool – small – 4 employees
m) Mark's Tire & Alignment – small – 10 employees
n) Potter & Phillips insurance – small – 4 employees
 - 6 & 14. MLS, newspaper, individuals
 8. As mandated by State Law
 11. Carteret County
 12. Or built if necessary

<i>G. Alton Glover</i> G. Alton Glover Relocation Agent	04/25/01 Date	<i>D. R. V. V.</i> Approved by	<i>5/4/01</i> Date
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U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT, COMMENTS ON:

"US 70, From Four lanes at Radio Island to North of Pinners Point Road (SR 1303), Beaufort, Carteret County, Federal Aid Project No. STPNHF-70(43), State Project No. 8.1162501, TIP No. R-3307" (Regulatory Division Action I.D. No. 199800930)


1. FLOOD PLAINS: POC - Mr. Bobby L. Willis, Planning Services Section, at (910) 251-4728

The proposed project is located in Carteret County and primarily within the jurisdictional limits of the town of Beaufort, both of which participate in the National Flood Insurance Program. From a review of Panels 706 and 707 of the August 1985 Carteret County Flood Insurance Rate Map (FIRM) and the two panels of the June 1980 Beaufort FIRM, the 100-year flood elevation in the vicinity of the proposed roadway improvements varies between 7 and 8 feet N.G.V.D. Although part of the proposed project would cross the 100-year flood plain, the effect on the 100-year flood elevations would likely be minimal, since the flooding source is coastal storm surge.

2. U.S. ARMY CORPS OF ENGINEERS PROJECTS: POC - Mr. Howard Varnam, Navigation Section at (910) 251-4411

From the map supplied with your request, it appears that the proposed high-rise bridge will cross the Corps-constructed navigation project in Gallants Channel and Town Creek. This project includes a channel, 15 feet deep and 100 feet wide, in Gallants Channel; and a channel, 12 feet deep and 150 feet wide, to a basin in Town Creek, 400 feet wide by 900 feet long. As you requested, enclosed is a map at a scale of 1 inch equals 200 feet showing the location of the project in State Plane coordinates, as well as project offsets. The proposed improvements should not adversely affect this navigation project, including its use by vessel traffic.

If you have questions or need further information relating to the Federal project, please contact Mr. Varnam.



Appendix C

Correspondence Letters

16590
07/21/98

If you should have any questions regarding this matter, please contact Ms. Linda Gilliam, Bridge Management Specialist, at (757) 398-6227.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann B. Deaton". The signature is fluid and cursive, with a large initial "A" and a stylized "D".

ANN B. DEATON
Chief, Bridge Administration Office
By direction of the Commander
Fifth Coast Guard District



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

September 3, 1998

Planning Services Section



Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Division of Highways
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Gilmore:

This is in response to your letter of June 17, 1998, requesting our comments on "US 70, From Four lanes at Radio Island to North of Pinners Point Road (SR 1303), Beaufort, Carteret County, Federal Aid Project No. STPNHF-70(43), State Project No. 8.1162501, TIP No. R-3307" (Regulatory Division Action I.D. No. 199800930).

Our comments involve impacts to flood plains and jurisdictional resources, which include waters, wetlands, and U.S. Army Corps of Engineers projects. Our Regulatory Division will respond separately on jurisdictional waters and wetlands issues. Our comments on the other issues are enclosed.

We appreciate the opportunity to comment on this project. If we can be of further assistance, please contact us.

Sincerely,


W. Coleman Long
Chief, Technical Services Division

Enclosure

Town of Beaufort

215 Pollock Street
P.O. Box 390 Beaufort, North Carolina 28516-0390
Telephone (919) 728-2141 Fax (919) 728-3982

ad
10/22/98

October 16, 1998

Commander (Aowb)
Fifth Coast Guard District
Federal Building, 4th Floor
431 Crawford Street
Portsmouth, Va. 23704-5004

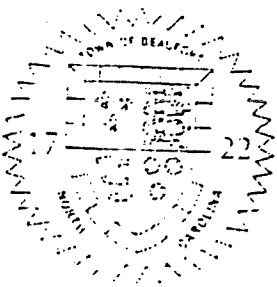
Dear Commander:

I am writing in reference to your request for comments on navigational information for Gallant's Channel drawbridge replacement.

On November 10, 1997, the Beaufort Board of Commissioners adopted a resolution (attached) that endorsed the 1997 Carteret County Transportation Improvement Program. The number one priority of that plan included the replacement of the Gallant's Channel Bridge (R-3307) with a 65 foot span fixed bridge. As you are probably aware, this same plan was endorsed by all the municipalities in Carteret County as well as the Carteret County Board of Commissioners.

A bridge with less than a 65 foot height clearance will affect-

- a. Homer Smith's Seafood Trawlers
- b. Discovery Diving's Marina
- c. the designated Harbor of Refuge
- d. Town Creek Marina
- e. T.D. Eure Construction
- f. commercial towing enterprises serving Gallant's Channel
- g. Future of the N.C. Maritime Museum Site on Gallant's Channel
- h. transient vessels heading to the Beaufort Waterfront via the Intracoastal Waterway
- i. other commercial fishing vessels



Beaufort by the Sea ... "Delightfully Different"

U.S. Department
of Transportation

United States
Coast Guard



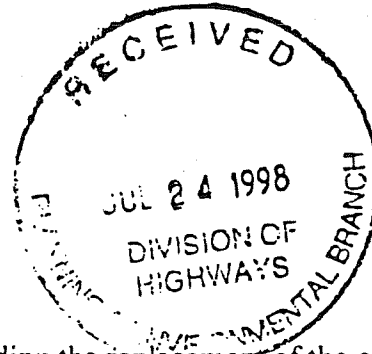
Commander
United States Coast Guard
Atlantic Area

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: Aowb
Phone: (757)398-6227

16590

07/21/98

Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
P.O. Box 25201
Raleigh, North Carolina 27611-5201



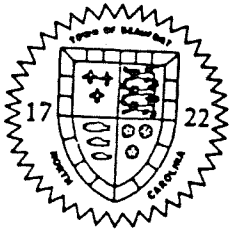
Dear Mr. Gilmore:

This is in response to your letter dated June 17, 1998, regarding the replacement of the existing drawbridge across Gallants Channel, mile 0.1, at Beaufort, North Carolina.

During the drafting of the Environmental Assessment the following issues need to be addressed:

- a. Commercial waterway users who transit the waterway to be crossed will need to be described in the EA by identifying their mast heights, drafts, type of vessel and types of cargo they carry.
- b. Recreational waterway users will need to be described by identifying their mast heights, drafts, and type of vessel.
- c. An estimated total value of yearly commercial shipping on the waterway that may be affected by the bridge action if a fixed bridge will be replacing the drawbridge needs to be included in the EA.
- d. Adjacent property owners and commercial businesses located along the waterway within the project site should be identified and any impact that the proposed bridge action may have on them should be addressed.
- e. When addressing wetland impacts, if acreage due to mitigation efforts has been saved or increased in volume on affected lands, state the amount of acreage saved or increased and the estimated monetary value of the lands affected in the EA.

We are also in receipt of your July 13, 1998 letter requesting that we conduct a navigational survey of Gallants Channel in the vicinity of the proposed project. A Coast Guard Preliminary Public Notice will be issued soliciting this information from the public. Once the thirty-day comment period has ended for this notice, we will provide you with any information obtained as a result of our public notice.



Town of Beaufort

P.O. BOX 390 • BEAUFORT, NORTH CAROLINA 28516-0390
TELEPHONE (919) 728-2141 • FAX (919) 728-3982

RESOLUTION ENDORSING THE PROPOSED 1997 TRANSPORTATION IMPROVEMENT PROGRAM

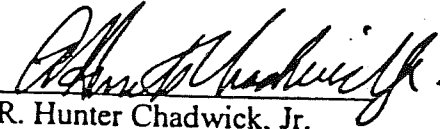
WHEREAS, the Carteret County Transportation Committee, in cooperation with the county's municipalities, has carefully considered the transportation needs of Carteret County; and

WHEREAS, the 1997 TIP, as prepared by the Transportation Committee, will be presented to the N.C. Department of Transportation at the public hearing for Division 2 on November 19, 1997, at the Public Service Complex in Kinston.

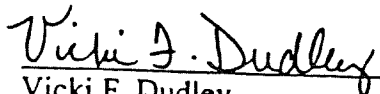
NOW, THEREFORE, BE IT HEREBY RESOLVED, that the Town of Beaufort Board of Commissioners does hereby accept and endorse the 1997 Transportation Improvement Program as presented to the Board of Commissioners on November 10, 1997.

BE IT FURTHER RESOLVED, that the Town of Beaufort Board of Commissioners petitions the N.C. Department of Transportation to include the submitted information for inclusion in the 1998-2004 Transportation Improvement Program.

ADOPTED, this the 10th day of November, 1997.


R. Hunter Chadwick, Jr.
Mayor

ATTEST:


Vicki F. Dudley
Town Clerk

U.S. Department
of Transportation

United States
Coast Guard



Commander
United States Coast Guard
Atlantic Area

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: Aowb
Phone: (757)398-6227

16590
01 Dec 98

Mr. Mark L. Reep, P.E.
Planning and Environmental Branch
North Carolina Department of Transportation
P.O. Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Reep:

The purpose of this letter is to inform you of the results of our preliminary public notice which solicited comments from the public regarding navigational usage of Gallants Channel and the replacement of the existing drawbridge across Gallants Channel (Beaufort Channel), mile 0.1, in Beaufort, North Carolina.

Coast Guard Preliminary Public Notice was issued on September 28, 1998 with the comment period ending October 28, 1998. Two comments were received as a result of this notice from the Mayor, Town of Beaufort, and from Mr. Haywood Weeks, Beaufort Docks. The Mayor lists in his letter businesses and navigational interests that will be affected if a new bridge is constructed with less than 65 feet as well as the negative impact a lower bridge would have on the Town of Beaufort. Mr. Weeks states in his letter the safety factor of a 65 foot fixed bridge and the economic impact of a lower fixed bridge. Copies of these two letters are enclosed as enclosure (1) and (2) for your review. We suggest that the information in these letters be considered during your review of a new fixed bridge across Gallants Channel.

If you should have any questions regarding this matter, please contact Ms. Linda Gilliam, Bridge Management Specialist, at (757) 398-6227.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ann B. Deaton".

ANN B. DEATON
Chief, Bridge Administration Section
By direction of the Commander
By direction

Encl: (1) Mayor, Town of Beaufort ltr dtd 10/16/98
(2) Mr. Weeks, Beaufort Docks ltr dtd 10/22/98
(3) Ms. Lorraine Copeland, Beaufort ltr dtd 10/22/98
(4) Mr. Joseph Beary, Atlantic FUELCO ltr

Copy: Mayor, Town of Beaufort
Mr. Haywood Weeks

Carteret County Transportation Improvement Program,

Carteret County Transportation Committee Recommended Priorities for 1997-98 TIP Presentation

Priority Number 1

- Replacement of the Gallants Channel Bridge (R-3307)

The replacement bridge and related connector to N.C. Highway 101 should be accelerated. The bridge and related improvements should be designed to achieve the following goals: (i) the bridge and road improvements should be located to minimize, to the extent practical, impacts to residences on and near West Beaufort Road, (ii) the bridge should have a 65 foot span, but the span should be located to minimize the visual impact to the Beaufort Historic District, (iii) the bridge should include attractive and easy-to-use ingress/egress routes to Turner Street/ Downtown Beaufort and West Beaufort Road/Town Creek, (iv) the connecting road on the east end of the bridge should be compatible with any future relocation of a portion of N.C. Highway 101, and (v) the connecting road should also be designed to allow for future connections to the proposed Carteret County "Northern Bypass" to the Havelock Bypass and to U.S. 70 east of Beaufort. The portion of the project east of N.C. 101 (as shown in the 1994 DOT feasibility study/task force report) should be relocated or abandoned because of its incompatibility with current land uses.

Priority Number 2

- U.S. 70 Corridor between Raleigh and Carteret County

Through Highway Trust Fund monies, accelerate construction of Bypasses at Clayton, Goldsboro, Kinston and Havelock (Projects R-2552, R-2553, R-2554 and R-1015). This is also the primary existing evacuation route in case of a storm event.

Priority Number 3

- Carteret County "Northern Bypass" from Havelock Bypass to Beaufort/Port of Morehead City

This project should be developed in phases based on available funding, environmental permits and probability of construction. The project should include the following components:

1. Replacement of Gallants Channel Bridge
2. Connecting multi-lane controlled access corridor

- on new location to Core Creek Bridge
3. Widening of Core Creek Bridge to four lanes
4. Widening of N.C. Highway 101 to four lanes to connecting point with new Havelock Bypass connector east of Harlowe
5. Connecting multi-lane controlled access corridor on new location between N.C. Highway 101 east of Harlowe and eastern terminus of U.S. 70 Havelock Bypass
6. Widening of existing U.S. 70 Newport River Bridge to four lanes

The design of the "Northern Bypass" should be compatible with any future relocation of a portion of N.C. Highway 101. The design should also allow for a connecting road to U.S. 70 East in the vicinity of East Carteret High School.

Priority Number 4 (tie)

- Relocation of a portion of N.C. Highway 101

This project should be coordinated with, and to the extent necessary, integrated with, the Gallants Channel Bridge replacement (R-3307) and the proposed "Northern Bypass" project.

Priority Number 4 (tie)

- Overpass at Intersection of N.C. Highway 24 with N.C. Highway 58.

This intersection handles a huge traffic volume particularly during the summer months. The widening of N.C. 24 in Cape Carteret and Cedar Point will increase traffic at this intersection beyond the capabilities of an at-grade intersection. Development of the Global TransPark and related improvements will also increase traffic on N.C. 58, making this overpass essential.

Priority Number 6

- Widening and improvement of U.S. 70 from Beaufort to East Carteret High School

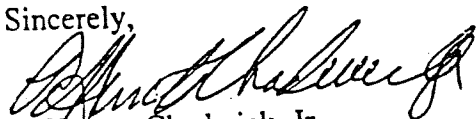
This corridor is a heavily traveled and dangerous section of U.S. 70. Converging traffic from the south, north and east at East Carteret High School creates an acute safety problem at the beginning end of the school day. Widening U.S. 70 to three

Page 2
October 16, 1998

As such, a shorter bridge height would prevent many sailing vessels access to Beaufort from the North which would cause a serious negative economic impact to the Town of Beaufort waterfront and the surrounding area.

I appreciate the opportunity to provide comments in this matter. Should you have questions, please let me know.

Sincerely,

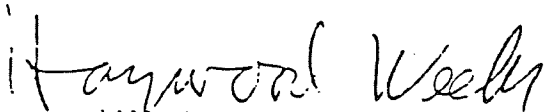
A handwritten signature in dark ink, appearing to read "R. Hunter Chadwick, Jr.", written in a cursive style.

R. Hunter Chadwick, Jr.
Mayor

Additionally, there is a very important marine safety reason why a less than 65 foot high bridge would be dangerous. There is a railroad bridge with a vertical clearance of only a few feet that parallels the existing 65 foot fixed bridge over the Newport River. This railroad bridge is currently being rebuilt and will be here for many, many years since it services the two locations of the N.C. State Port. When a major storm approaches this railroad bridge locks in the closed position and then no sailboats can escape up the waterway here. There is no railroad bridge across Gallants Channel. The one that was here has been removed and the track removed and the land is for sale. Therefore, with a 65 foot high fixed bridge over Gallants Channel, medium and large sailboats could escape a storm by using Gallants Channel to run up the coast for safety. The great numbers of sailboats in this area, both local and transient, would therefore depend on a 65 foot bridge across Gallants Channel for their very survival as well as the lives of their owners and crew who would be attempting to save them from a storm.

To summarize this letter, a less than 65 foot high bridge across Gallants Channel would be an economic disaster to the town of Beaufort, a great inconvenience to the many sailboats that use this area, and a fatal disaster to the great number of medium and large sailboats that frequent this area in the event of a bad storm. We have had three hurricanes in this area in the past three years.

Sincerely,


Haywood Weeks

**Carteret County Transportation Improvement Program
Carteret County Transportation Committee Recommended Priorities
for 1997-98 TIP Presentation
(continued from prior page)**

lanes by adding a center turn lane, and straightening the existing road alignment, are immediate needs on this corridor.

Priority Number 7

- Improvements to U.S. 70 and N.C. 12 from East Carteret High School to Atlantic (U.S. 70) and Cedar Island (N.C. 12)

Improvements are needed to upgrade U.S. 70 and N.C. 12 in the "Down East" region of Carteret County. Traffic is increasing in this region as both permanent and transient populations increase. This corridor is critical for access to the North Carolina Ferry System at Cedar Island, and it is the only evacuation route from eastern Carteret County in case of a storm event.

Could be even less than 65 feet.

Also as you may be aware the Michael J. Smith Airport is located very close to the end of several of the optional sites for the bridge and a 65 foot bridge could be a real hazard both during construction and after construction to planes landing and taking off from another main runway at the airport which is located not so many feet from the West Bessemer Road which is the tie-in for most of the preliminary sites.

I would hope you would take these concerns into consideration.

Sincerely,

Lanaine W. Capeland

BEAUFORT DOCKS
TOWN OF BEAUFORT
500 FRONT STREET
BEAUFORT, NORTH CAROLINA 28516
(919) 728-2503

October 22, 1998

Commander (AOWB)
Fifth Coast Guard District
Federal Building, 4th Floor
431 Crawford Street
Portsmouth, Virginia 23704-5004

Sir:

In response to your request for comments on the proposed fixed bridge over Gallants Channel in Beaufort, North Carolina, please consider the following:

I have been the manager of the Town of Beaufort's docks for many years. When these docks were first completed in 1978 with eight boat slips, Beaufort was basically a dead town, abandoned by all outside commerce. There was for example, only one restaurant in town. Over the years we advertised and promoted the docks and gradually expanded them from the original 8 slips to 65 slips. We operate these docks as a transient boat facility, not as a permanent boat facility. Accordingly, the influx of visiting boats has grown with the expansion of the docks and this, in turn, has brought the life-giving commerce that has revitalized the town. Today, for example there are 16 restaurants in town. These restaurants, and other businesses which have grown like the restaurants, have turned a dead town into a successful, lively commercial community which generates many jobs and has made the town the envy of many other communities.

We have a great many medium and large sailboats with masts greater than 65 feet visiting our town. In fact, Beaufort has gained the reputation of being one of the most popular transient sailboat ports on the waterway. A less than 65 foot high bridge over Gallants Channel, which is the entrance to Beaufort coming south in the waterway and the exit from Beaufort going north, would severely restrict medium and large sailboats from visiting Beaufort. To force these boats to go around the much longer route around Radio Island would cause many of these sailboats to bypass Beaufort altogether, which would have an extremely detrimental effect on the economy of the town. These sailboats can come all the way down the waterway from way up north without encountering a fixed bridge less than 65 feet in height and then they suddenly would be confronted with a fixed bridge at Beaufort that they couldn't get under. Human nature would direct them to simply not be bothered and they would bypass our town. This would seriously harm the economy of the town and inconvenience a great number of boaters.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

July 28, 1998



Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
Division of Highways
P.O. Box 25201
Raleigh, NC 27611-5201

Dear Mr. Gilmore:

This responds to your letter of June 17, 1998, requesting information from the U.S. Fish and Wildlife Service (Service) for the purpose of evaluating the potential environmental impacts of the preliminary alignment alternatives for the reconstruction or replacement of US 70 from Radio Island to north of Pinners Point Road (SR1303) at Beaufort, Carteret County, North Carolina (TIP No. R-3307). This report provides scoping information and is provided in accordance with provisions of the Fish and Wildlife Coordination Act (FWCA) (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This report also serves as initial scoping comments to federal and state resource agencies for use in their permitting and/or certification processes for this project.

The North Carolina Department of Transportation (NCDOT) proposes to extend US 70 as a multi-lane facility from 4 lanes at Radio Island to north of Pinners Point Road, a length of 3.5 kilometers (2.2 miles). The project includes replacing the existing drawbridge over Gallants Channel with a high-rise bridge.

Eight preliminary alternatives are being considered for this project:

1. Alternative 1A replaces the existing Gallant's Channel drawbridge with a four-lane high-rise bridge and extends US 70 as a four-lane parkway on new location from Stanton Road to north of Pinners Point Road. A connector is proposed from Stanton Road to Turner Street (Turner Street Connector) to maintain access from the Town of Beaufort and the new US 70 route;
2. Alternative 1B is the same as Alternative 1A except for the connector between Beaufort and US 70. This alternative provides a connector along Stanton Road and Queen Street (Queen Street Connector) to maintain access to Beaufort and the new US 70;

ad 11/13/98

134 Riverside
Beaufort, N.C. 28514
October 22, 1998

Commander (Aowb)
Fifth Coast Guard District
Federal Building, 4th Floor
431 Crawford Street
Portsmouth, Va. 23704-5004

Dear Sir:

I am an active volunteer with The North Carolina Maritime Museum one of the largest maritime museums on the East Coast. This museum is located in Beaufort North Carolina.

The museum has just purchased about 36 acres of land west of the Town Creek Marina to expand the museum activities and displays.

One of our high hopes for this land would be to bring in "tall ships" which I'm sure you are aware are great tourist draws. However I know you know that tall ships cannot get under a 65 foot bridge.

Several of us have suggested to the NCDOT that the bridge be built west of the museum property and the roadway tied into Runway 8-26 at the Beaufort-Morehead City (Michael J. Smith) Airport. If the DOT would do this they would have to buy very little land instead of buying up many houses and the bridge

should be employed. Highway shoulder and median widths should be reduced through wetland areas. Roadway embankments and fill areas should be stabilized by using appropriate erosion control devices and/or techniques. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons.

The National Wetlands Inventory (NWI) map of the Beaufort 7.5 Minute Quadrangle indicates that there are estuarine wetlands in the vicinity of the proposed bridge removal, and US 70 replacement location, that may be impacted by the proposed alternatives. However, while the NWI maps are useful for providing an overview of a given area, they should not be relied upon in lieu of a detailed wetland delineation by trained personnel using an acceptable wetland classification methodology.

We reserve the right to review any required federal or state permits that may be required for this project at the public notice stage. We may have no objection, provide recommendations for modification of the project, or recommend denial. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation.

In addition to the above guidance, we recommend that the environmental documentation for this project include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined purpose and need for the proposed project, including a discussion of the projects's independent utility;
2. A description of the proposed action with an analysis of all alternatives being considered, including the upgrading of existing roads and a "no action" alternative;
3. A description of the fish and wildlife resources, and their habitats, within the project impact area that may be directly or indirectly affected;
4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, and/or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers (Corps);
5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;

ATLANTIC FUELCO
PO BOX 115
BEAUFORT NC. 28516

62
11/4/98

To Whom it may Concern;

This letter is to voice concern over possible decisions regarding vertical clearance of the proposed Gallant Channel bridge. A vertical clearance of less than 65 feet would be damaging to the business which serve the larger vessels, both power & sail, commercial and recreational that transit this channel.

To re-route vessels with more than the proposed 55 foot or possibly less clearance would be to risk losing the business to competitive business in the Morehead City area. With the amount of traffic using Gallant Channel to reach the Beaufort Waterfront for services it would seem that this bridge should have at least the 65' vertical clearance that the ICW bridges do both north & south of Beaufort.

Respectfully Yours
Joseph B. Boney

- d. The impacts of interrelated actions (those that are part of a larger action and depend on the larger action for their justification) and interdependent actions (those that have no independent utility apart from the action under consideration); and,
 - e. The cumulative impacts of future state and private activities (not requiring federal agency involvement) that will be considered as part of future Section 7 consultation;
- 4. A description of the manner in which the action may affect any listed species or associated habitat including project proposals to reduce/eliminate adverse effects. Direct mortality, injury, harassment, the loss of habitat, and/or the degradation of habitat are all ways in which listed species may be adversely affected;
 - 5. A summary of evaluation criteria to be used as a measure of potential effects. Criteria may include post-project population size, long-term population viability, habitat quality, and/or habitat quantity; and,
 - 6. Based on evaluation criteria, a determination of whether the project is not likely to adversely affect or may affect threatened and endangered species.

Candidate species are those plant and animal species for which the Service has sufficient information on their biological status and threats to their survival to propose them as endangered or threatened under the ESA. Although candidate species receive no statutory protection under the ESA, federal agencies are required to informally confer with the Service on actions likely to jeopardize the continued existence of these species or that may destroy or modify proposed critical habitat.

Federal species of concern (FSC) include those species for which the Service does not have enough scientific information to support a listing proposal or species which do not warrant listing at the present time. These species receive no statutory protection under the ESA, but could become candidates in the future if additional scientific information becomes available indicating that they are endangered or threatened. Formal listing places the species under the full protection of the ESA, and necessitates a new survey if its status in the project area is unknown. Therefore, it would be prudent for the NCDOT to avoid any adverse impacts to candidate species or their habitat. The North Carolina Natural Heritage Program should be contacted for information on species under state protection.







3. Alternative 1C is the same as 1A from Radio Island to NC 101 and provides the Turner Street Connector. From NC 101 to US 70, 1C extends farther north to reduce driveway conflicts with existing commercial and residential development on the east side of town;
4. Alternative 1D is the same as 1B from Radio Island to NC 101 and provides the Queen Street Connector. From NC 101 to US 70, 1D extends farther north to reduce driveway conflicts with existing commercial and residential development on the east side of town;
5. Alternative 2A replaces the existing drawbridge with a four-lane high-rise bridge and widens existing West Beaufort Road and US 70 to five lanes from Stanton Road to north of Pinners Point Road. The Turner Street Connector is proposed to maintain access between Beaufort and US 70;
6. Alternative 2B is the same as 2A except for the connector between Beaufort and US 70. The Queen Street Connector is proposed for this alternative;
7. Alternative 3A replaces the existing drawbridge with a four-lane high-rise bridge along the existing location and widens Cedar Street and Live Oak Road to five miles from east of Gallants Channel to north of Pinners Point Road and;
8. Alternative 3B replaces the existing drawbridge with a four-lane high-rise bridge along the existing location, provides a one-way pair along existing Cedar Street and Pine Street, and widens Live Oak Road to five lanes from Cedar Street to north of Pinners Point Road.

The mission of the Service is to provide leadership in the conservation, protection, and enhancement of fish and wildlife, and their habitats, for the continuing benefit of all people. Due to staffing limitations, we are unable to provide you with site-specific comments at this time. However, the following recommendations are provided to assist you in your planning process and to facilitate a thorough and timely review of the project.



Generally, the Service recommends that wetland impacts be avoided and minimized to the maximum extent practical as outlined in Section 404 (b)(1) of the Clean Water Act Amendments of 1977. In regard to avoidance and minimization of impacts, we recommend that proposed highway projects be aligned along or adjacent to existing roadways, utility corridors, or previously developed areas in order to minimize habitat fragmentation and encroachment. Areas exhibiting high biodiversity or ecological value important to the watershed and/or region should be avoided. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a structure wherever feasible. Where bridging is not feasible, culvert structures that maintain natural water flows and hydraulic regimes without scouring, or impeding fish and wildlife passage,

Mapping Symbols for Threatened and Endangered Species



Birds

-  Bald Eagle
-  Peregrine Falcon
-  Piping Plover
-  Red-cockaded Woodpecker
-  Roseate Tern
-  Wood Stork



Fish

-  Cape Fear Shiner
-  Waccamaw Silverside











Mussels

-  Dwarf-wedge Mussel
-  Tar Spiny mussel

Mammals

-  Eastern Cougar
-  Red Wolf

Plants

-  American Chaffseed
-  Harperella
-  Michaux's Sumac
-  Pondberry
-  Rough-leaved Loosestrife
-  Schweinitz's Sunflower
-  Seabeach Amaranth
-  Sensitive Joint-vetch
-  Small Whorled Pogonia
-  Smooth Coneflower

***Seaturtles are seasonally ubiquitous along coastal regions,
and therefore, are not labeled. Shortnosed Sturgeon and Manatees
are seasonally ubiquitous in estuarine areas and are also not labeled.***

6. Design features and/or construction techniques which would be employed to avoid or minimize the fragmentation or direct loss of wildlife habitat value;
7. Design features, construction techniques, and/or any other mitigation measures which would be employed at wetland crossings and stream channel relocations to avoid or minimize impacts to waters of the United States; and,
8. If unavoidable wetland impacts are proposed, we recommend that every effort be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity, preferable via conservation easement, should be explored at the outset.

The attached pages identify the federally-listed endangered, threatened, and candidate species that are known to occur in Carteret County. Please note that there are recorded occurrences of the red-cockaded woodpecker (*Picoides borealis*) and the seabeach amaranth (*Amaranthus pumilus*) in the project area. Habitat requirements for the federally-listed species in the project area should be compared with the available habitat at the project site. If suitable habitat is present within the action area of the project, field surveys for the species should be performed. Environmental documentation should include survey methodologies and results. In addition to this guidance, the following information should be included in the document regarding protected species:

1. A map and description of the specific area used in the analysis of direct, indirect, and cumulative impacts;
2. A description of the biology and status of the listed species and the habitat of the species that may be affected by the action, including the results of any onsite inspections;
3. An analysis of the "effects of the action" on the listed species and associated habitat which includes consideration of:
 - a. The environmental baseline which is an analysis of the effects of past and ongoing human and natural factors leading to the current status of the species and its habitat;
 - b. The impacts of past and present federal, state, and private activities in the project area and cumulative impacts area;
 - c. The direct and indirect impacts of the proposed action. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur;

Start (Reep)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive N
St. Petersburg, Florida 33702

February 13, 1998

Mr. H. Franklin Vick, P.E. Manager
Planning & Environmental Branch
N.C. Division of Highways
P.O. Box 25201
Raleigh, North Carolina 27611



Dear Mr. Vick:

Please reference your January 27, 1998, request for comments on the scope of issues to be addressed in the Environmental Assessment (EA) for the proposed widening of US 70 to four lanes from Radio Island to north of SR 1303 (Pinners Point Road) in Beaufort, Carteret County, North Carolina, State Project No. 8.1162501, Federal Aid Project No. STPNHF-70(43), TIP No. R-3307. The National Marine Fisheries Service has reviewed the information included with your letter and offers the following comments for your consideration.

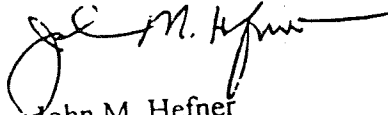
All current alternatives involve new crossings of Gallants Channel and Town Creek. These waters are a part of the Newport River estuarine system and provide habitat for a variety of commercially and recreationally important fish and shellfish for which we are responsible. Of particular concern is the project's impact on the saltmarsh cordgrass (*Spartina alterniflora*) marsh found in the upper reaches of Turners Creek. Alternatives A and B include connectors with downtown Beaufort that cross this creek. These marshes provide forage areas and a refuge from predators for juvenile aquatic species. They also provide a source of detrital material, an important component in the aquatic food chain, and help maintain water quality necessary for continued fishery production. Furthermore, Gallants Channel is an important pathway through which juveniles of estuarine dependent species travel between offshore spawning areas and their estuarine nursery areas. In view of the above, we recommend that the EA for this project address the following issues, information needs, and concerns.

1. The EA should describe the waters and wetlands found in the project area and the impacts of the project alternatives on these resources.
2. The EA should describe the fishery resources found in the project area and the project's potential impact on these resources.
3. The EA should describe the location and types of bridges included in plans for each alternative. Any alternative that includes a connector crossing of the upper reaches of Town Creek should provide for bridging of these wetlands.



The Service appreciates the opportunity to comment on this project. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding these comments, please contact Tom McCartney at 919-856-4520, ext. 32.

Sincerely,



John M. Hefner
Ecological Services Supervisor

Enclosures

cc:

COE, Wilmington, NC (Scott McLendon)
NCDOT, Raleigh, NC (Mark Reep)
NCDWQ, Raleigh, NC (Cyndi Bell)
WRC, Creedmore, NC (David Cox)
FHWA, Raleigh, NC (Nicholas Graf)
EPA, Atlanta, GA (Ted Bisterfield)

FWS/R4:TMcCartney:TM:07/27/98:919/856-4520 extension 32:\r-3307.tip

Hart / Reep



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive N
St. Petersburg, Florida 33702

July 14, 1998



Mr. H. Franklin Vick, P.E. Manager
Planning & Environmental Branch
N.C. Division of Highways
P.O. Box 25201
Raleigh, North Carolina 27611

Attention Mark Reep

Dear Mr. Vick:

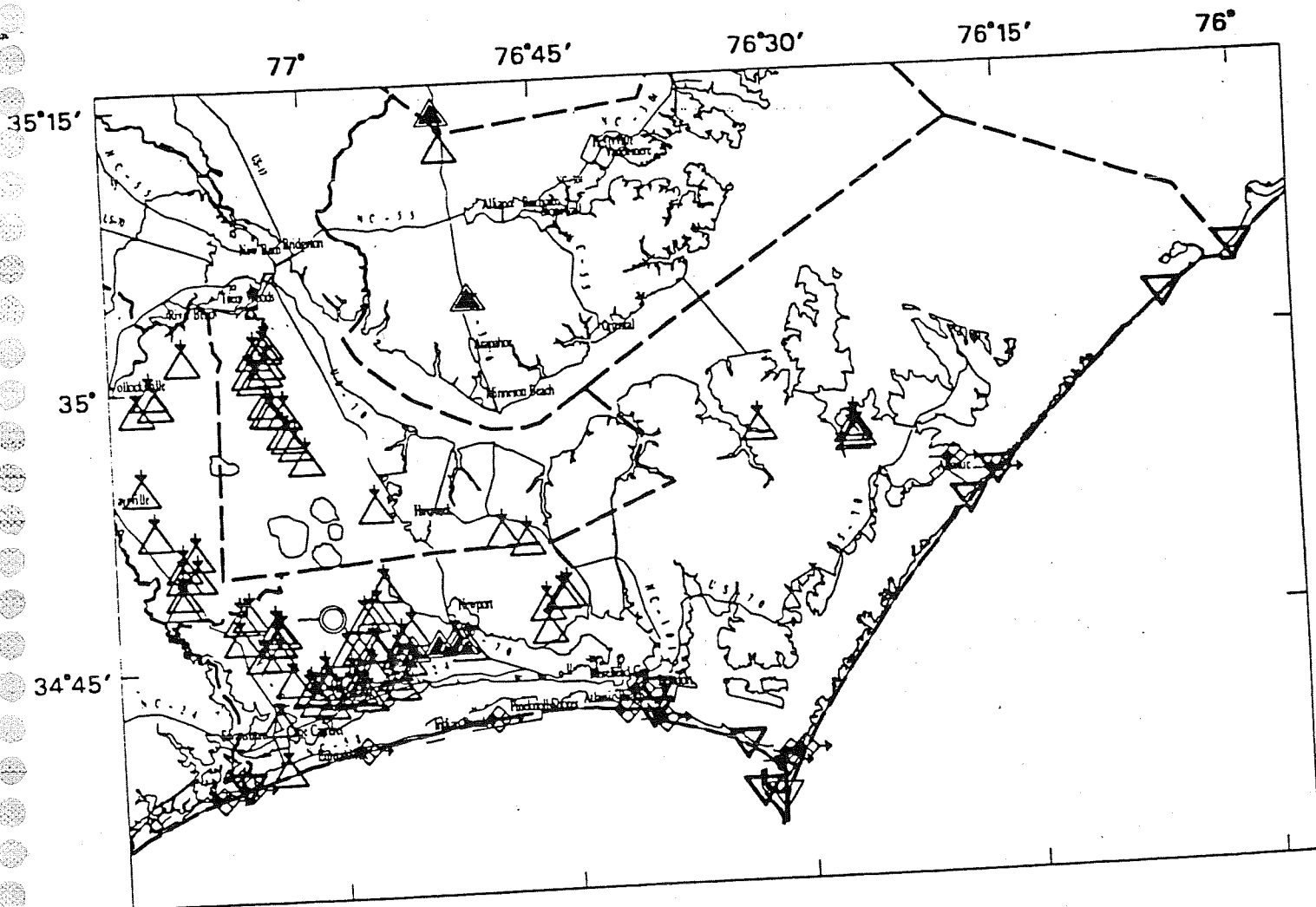
Please reference your June 17, 1998, request for comments on the issues to be addressed in the Environmental Assessment (EA) for the proposed widening of US 70 to Four lanes at Radio Island to North of Pinners Point Road (SR1303), Beaufort, Carteret County, North Carolina, Federal Aid Project No. STPNHF-70(43), State Project No. 8.1162501, TIP No. R-3307. The National Marine Fisheries Service has reviewed the information included with your letter and offers the following comments for your consideration.

In response to a previous letter on this subject dated January 27, 1998, we provided comments dated February 13, 1998, regarding the scope of issues to be addressed in the EA for this project. The issues, information needs, and concerns identified in this letter remain valid. However, we reiterate our concern that this project will impact open water, intertidal flats, and marshlands that provide habitat for a variety of recreationally and commercially important fishery resources for which we are responsible. Accordingly, we emphasize that losses of these habitats should be minimized to the maximum extent practicable regardless of the alternative selected for this project. Alternatives 1A, 1B, 2A, and 2B have proposed connectors that cross Turners Creek and its wetlands. In our opinion, bridging all wetlands would be the only acceptable alternative for these crossings.



Accounts of Selected Federally Listed Species In CARTERET County

Data represented on these maps are not based on comprehensive inventories of this county. Lack of data must not be construed to mean that listed species are not present.



Prepared by U.S. Fish and Wildlife Service
based on data provided by NC Natural Heritage Program
D. Newcomb, K. Tripp 1/15/98

0 1 2 3 4 5 MILES
0 1 2 3 4 5 KILOMETERS

expires 1/31/99

Start/Rep



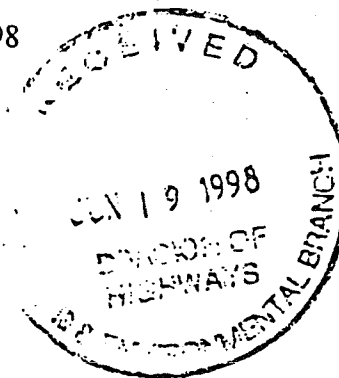
North Carolina
Department of Administration

James B. Hunt, Jr., Governor

Katie G. Dorsett, Secretary

June 18, 1998

Mr. William Gilmore
N.C. Department of Transportation
Planning and Environmental Branch
Transportation Building
Raleigh NC 27601



Dear Mr. Gilmore:

Subject: Scoping - Proposed Improvements to Us 70, from Four Lanes at Radio Island to North of Pinners Point Road (SR 1303) in Beaufort, NC; TIP #R-3307

The N. C. State Clearinghouse has received the above project for intergovernmental review. This project has been assigned State Application Number 98-E-4220-0833. Please use this number with all inquiries or correspondence with this office.

Review of this project should be completed on or before 07/27/1998. Should you have any questions, please call (919)733-7232.

Sincerely,

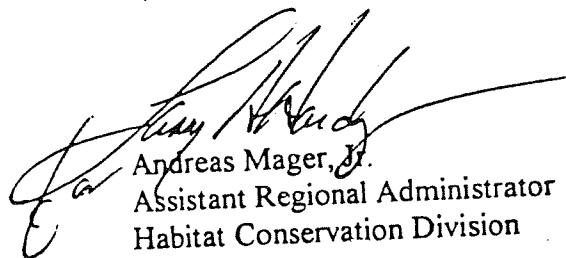
A handwritten signature in cursive script that reads "Jeanette Furney".

Ms. Jeanette Furney
Administrative Assistant

4. Waters surrounding the project site support commercially and recreationally important quantities of shellfish. Non-point source run-off from highways and bridges can cause a closure of shellfishing areas. The EA should address measures to be taken to prevent an increase in storm water run-off and the associated pollutants from reaching these waters.
5. The EA should address construction methods of the proposed bridge and to what extent the excavation or filling of wetlands or shallow water habitat will be involved.
6. Commercial fishing vessels frequently use Gallants channel as they travel to and from their fishing grounds. Also, several commercial fish houses are located in the vicinity of the project. The EA should address how the project will impact commercial boat traffic and other commercial fishing operations.

For site specific information on the fishery resources and their habitats found in the project area we recommend that you contact the North Carolina Division of Marine Fisheries office in Morehead City, North Carolina. Thank you for the opportunity to provide these comments. If we can be of further assistance please advise.

Sincerely,



Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

cc: FWS, ATLA, GA
FWS, Raleigh, NC
EPA, ATLA, GA
NCDEHNR, Raleigh, NC
NCDEHNR, Morehead City, NC
COE, Wilmington, NC
F/SER4

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES



ORISIO
1011

JAMES B. HUNT JR.
GOVERNOR

MEMORANDUM

WAYNE MCDEVITT
SECRETARY

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee ✓
Environmental Review Coordinator

RE: 98-0833 US 70 Improvements, Carteret County

DATE: July 27, 1998

The Department of Environment and Natural Resources has reviewed the proposed information. The attached comments are for the applicant's information and consideration.

Thank you for the opportunity to review.

attachments

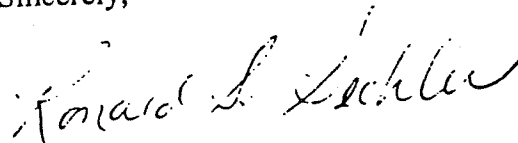
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JUL 27 1998

N.C. STATE CLEARINGHOUSE

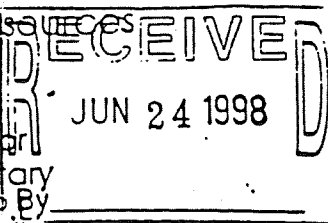
Thank you for the opportunity to provide these comments. If we can be of further assistance please advise.

Sincerely,



AM Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

cc: FWS, ATLA, GA
FWS, Raleigh, NC
EPA, ATLA, GA
NCDENR, Raleigh, NC
NCDENR, Morehead City, NC
COE, Wilmington, NC
F/SER4



James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Charles H. Gardner, P.G., P.E.
Director and State Geologist

PROJECT REVIEW COMMENTS

Project Number: 98-E-0833 County: Carteret
Project Name: US 70, From Four lanes at Radio Island to N. of Pinners Point Rd.

NC Office of State Planning - Geodetic Survey

☒ This project will impact 2 geodetic survey markers. N.C. Geodetic Survey should be contacted prior to construction at P.O. Box 27687, Raleigh, N.C. 27611 (919) 733-3836. Intentional destruction of a geodetic monument is a violation of N.C. General Statute 102-4.

☐ This project will have no impact on geodetic survey markers.

☐ Other (comments attached)

For more information contact the N.C. Office of State Planning, Geodetic Survey Office at 919/733-3836.

Amy Walker
Reviewer

6/22/98
Date

Erosion and Sedimentation Control

☐ No comment

☐ This project will require approval of an erosion and sedimentation control plan prior to beginning any land-disturbing activity if more than one (1) acre will be disturbed.

☐ If an environmental document is required to satisfy Environmental Policy Act (SEPA) requirements, the document must be submitted as part of the erosion and sedimentation control plan.

☒ If any portion of the project is located within a High Quality Water Zone (HQW), as classified by the Division of Environmental Management, increased design standards for sediment and erosion control will apply.

☒ The erosion and sedimentation control plan required for this project should be prepared by the Department of Transportation under the erosion control program delegation to the Division of Highways from the North Carolina Sedimentation Control Commission.

☐ Other (comments attached)

For more information contact the Land Quality Section at 919/733-4574.

David Ward
Reviewer

6/25/98
Date
Geodetic Survey Section
(919) 733-3836
FAX: 733-4207

Geological Survey Section
(919) 733-3423
FAX: (919) 733-0700

Land Quality Section
(919) 733-4574
FAX: 733-2375

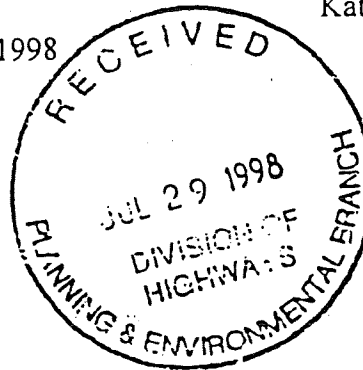


North Carolina
Department of Administration

James B. Hunt, Jr., Governor

Katie G. Dorsett, Secretary

July 27, 1998



Mr. William Gilmore
N.C. Department of Transportation
Planning and Environmental Branch
Transportation Building
Raleigh, NC 27601

Dear Mr. Gilmore:

Re: SCH File # 98-E-4220-0833; Scoping Proposed Improvements to Us 70, from Four Lanes at Radio Island to North of Pinners Point Road (SR 1303) in Beaufort, NC; TIP #R-3307

The above referenced project has been reviewed through the State Clearinghouse Intergovernmental Review Process. Attached to this letter are comments made by agencies reviewing this document.

Should you have any questions, please do not hesitate to call me at (919) 733-7232.

Sincerely,

Mrs. Chrys Baggett, Director
N. C. State Clearinghouse

Attachments

cc: Region P

and,

NCDA Plant Conservation Program
P. O. Box 27647
Raleigh, N. C. 27611
(919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.
3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.
5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.
8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.
9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 528-9886.

cc: Howard Hall, U. S. Fish and Wildlife Service, Raleigh

State of North Carolina
Department of Environment and Natural Resources

Reviewing Office:

Wilmington

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number:

98E0833

Due Date:

7/23/98

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

		Normal Process Time (statutory time limit)
PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	
<input type="checkbox"/> Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
<input type="checkbox"/> NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
<input type="checkbox"/> Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
<input type="checkbox"/> Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
<input type="checkbox"/> Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input type="checkbox"/> Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
<input checked="" type="checkbox"/> Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
<input type="checkbox"/> Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.		
<input type="checkbox"/> Complex Source Permit required under 15 A NCAC 2D.0800		
<input type="checkbox"/> The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (land Quality Sect.) At least 30 days before beginning activity. A fee of \$30 for the first acre and \$2000 for each additional acre or part must accompany the plan.		20 days (30 days)
<input checked="" type="checkbox"/> The Sedimentation Pollution control Act of 1973 must be addressed with respect to the referenced Local Ordinance <u>Memorandum of Agreement with that the Land Quality Section has with the Dept. of Transportation</u>		(30 days)
<input type="checkbox"/> Mining Permit	On-site inspection usual. Surety bond filed with ENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/> North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
<input type="checkbox"/> Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
<input type="checkbox"/> Oil Refining Facilities	N/A	90-120 days (N/A)
<input type="checkbox"/> Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage of the total project cost will be required upon completion.	30 days (60 days)

State of North Carolina
Department of Environment
and Natural Resources
Division of Water Quality

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
A. Preston Howard, Jr., P.E., Director



July 23, 1998

MEMORANDUM

TO: Melba McGee, DENR Environmental Coordinator

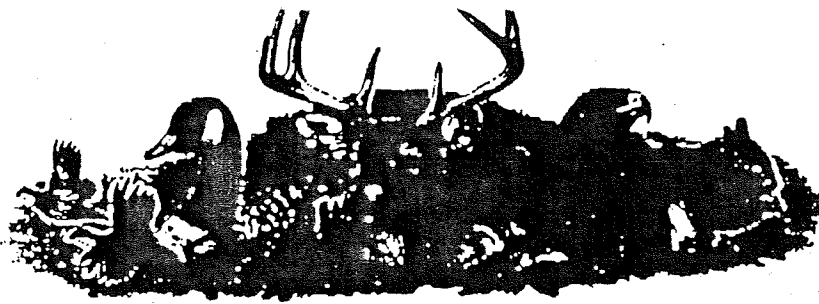
FROM: Mary Kiesau, DWQ SEPA Coordinator *mk*

RE: Comments on DOT Scoping, DENR# 98-E-0833, DWQ# 12132
US 70 Improvements, from Radio Island to north of Pinners Point Road,
Beaufort, Carteret County - TIP No. R-3307

The Division of Water Quality (DWQ) requests that the following topics be discussed in the EA document:

- A. Identify the streams potentially impacted by the project. The current stream classifications and use support ratings for these streams should be included. This information is available from DWQ through the following contacts:

Liz Kovasckitz - Classifications - 919-733-5083, ext. 572
Carol Metz - Use Support Ratings - 919-733-5083, ext. 562
- B. Identify the linear feet of stream channelization/relocations. If the original stream banks were vegetated, it is requested that the channelized/relocated stream banks be revegetated.
- C. Identify the number and locations of all proposed stream crossings.
- D. Will permanent spill catch basins be utilized? DWQ requests that these catch basins be placed at all water supply stream crossings. Identify the responsible party for maintenance.
- E. Identify the stormwater controls (permanent and temporary) that will be used.
- F. Please ensure that sediment and erosion control measures are not placed in wetlands.
- G. Wetland Impacts
 - i) Identify the federal manual used for identifying and delineating jurisdictional wetlands.
 - ii) Have wetlands been avoided as much as possible?
 - iii) Have wetland impacts been minimized?
 - iv) Mitigation measures to compensate for habitat losses.
 - v) Wetland impacts by plant communities affected.

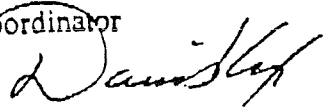


North Carolina Wildlife Resources Commission

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391
Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs, DENR

FROM: David Cox, Highway Project Coordinator
Habitat Conservation Program 

DATE: July 23, 1998

SUBJECT: Request for information from the N. C. Department of Transportation (NCDOT) regarding fish and wildlife US 70 improvements from the existing four lanes at Radio Island to north of Pinners Point Road (SR 1303), Carteret County, North Carolina, TIP No. R-3307, SCII Project No. 98-E-0833.

This memorandum responds to a request from Mr. William D. Gilmore of the NCDOT for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements, and our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

At this time the NCWRC has no specific recommendations or concerns regarding the subject project. However, to help facilitate document preparation and the review process, our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

The Natural Heritage Program
N. C. Division of Parks and Recreation
P. O. Box 27687
Raleigh, N. C. 27611
(919) 733-7795

- viii) If inducement for urban development is predicted as a result of the road improvements, these impacts should be defined in the EA and should be considered indirect impacts of the transportation project.
- ix) What measures have DOT and the local governments in the project area agreed to in order to effectively manage development potential along the road right-of-way to reduce the potential indirect land use changes and environmental impacts?
- x) What environmental resources could be affected by the identified urban development that will be allowed or encouraged by the road improvements? What degree of impact to these resources will be anticipated? What impacts may be significant in nature? Specific to the regulatory authority of DWQ, the EA should discuss the types and severity of point and non-point source water quality impacts anticipated from this additional development.
- xi) What regulations are currently in place at the local government level that would address these significant potential indirect environmental impacts?
- xii) The EA should discuss these impacts (and others that are applicable to the individual project), and quantify them when possible. In addition to reporting on the types and significance of each direct and indirect impact of the project, the EA should define how DOT (with their authorities and resources) and affected local governments (with land use control in the project area) are planning to avoid, reduce or mitigate these impacts to a level of insignificance. The SEPA rules and statutes require that prior to issuance of a FONSI, any identified significant environmental impacts in an EA be avoided, minimized or mitigated to a level less than significant. Therefore, the EA should document how the indirect effects of urban growth are not going to significantly impact water quality and all other environmental concerns resulting from this proposed project, or a FONSI should not be issued.

- L. The following discussion is meant to help explain the direct and indirect impacts issue in terms of water quality. All of these issues, as applicable to the specifics of the project, should be discussed in a DOT EA:

In evaluating the direct water quality effects of a transportation improvement project, typical concerns involve wetland, aquatic habitat and stream impacts from construction, the current quality of the waters and ecosystem of the streams and rivers to be affected by construction activities, the potential effect of spills and run-off from the road on water quality, how that might effect overall stream health and the other users of that water, etc. An indirect impact of a transportation project may include increases in development in the vicinity of the road widening, if the project will be providing new or improved access to future growth areas that are currently undeveloped. One typical impact of increased development might include increasing amounts of urban stormwater in the project service area. Land-disturbing activities associated with road construction and land development may also result in increased stream sedimentation. And over the longer term, development features such as increased impervious surface areas and stormwater drainage systems will only exacerbate water quality problems. Predictable impacts could include more rapid and erosive stream flow in the creek, loss of aquatic habitat and more efficient delivery of pollutants (such as fertilizers, pesticides, sediment and automobile byproducts) to the stream. These impacts could be of special concern if the project is proposed in an area with state and federally endangered species or if the waters are high quality or nutrient sensitive.

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF COASTAL MANAGEMENT

MEMORANDUM

TO: Melba McGee, NC Division of Policy and Development
FROM: Steve Benton, NC Division of Coastal Management

SUBJECT: Review of SCH# 98-0833

DATE: 7/21/98

— A COPY OF ALL COMMENTS RECEIVED BY THE SCH IS REQUESTED — REVIEWER COMMENTS ATTACHED

Review Comments:

— This document is being reviewed for consistency with the NC Coastal Management Program pursuant to federal law and or NC Executive Order 15. Agency comments received by SCH are needed to develop the State's consistency position.

Project Review Number (if different from above) _____

A consistency position will be developed based upon our review on or before _____.

— A Consistency Determination document _____ is, or _____ may be required for this project pursuant to federal law and or NC Executive Order 15. Applicant should contact Steve Benton or Caroline Bellis in Raleigh, phone (919)733-2293, for information on proper document format and applicable state guidelines and land use plan policies.

— Proposal is in draft form, a consistency response is inappropriate at this time. A Consistency Determination should be included in the final document.

— A Consistency Determination Document (pursuant to federal law and/or NC Executive Order 15) is not required.

— A consistency response has already been issued.

Project Number _____ Date Issued _____

— Proposal involves < 20 Acres and or a structure < 60,000 Square Feet and no AEC's or Land Use Plan problems.

— Proposal is not in the Coastal Area and will have no significant impacts on any land or water use or natural resources of the Coastal Area.

✓ A CAMA Permit ☒ is, or _____ may be required for all or part of this project. Applicant should contact Ted Tyndall in Morrisville City, phone # 919-808-2800, for information.

— A CAMA Permit _____ has already been issued, or _____ is currently being reviewed under separate circulation. Permit Number _____ Date Issued _____

✓ Other (see attached). *Will forward any field comments upon receipt*

State of North Carolina Consistency Position:

— The proposal is consistent with the NC Coastal Management Program provided that all conditions are adhered to and that all state authorization and/or permit requirements are met prior to implementation of the project.

— The proposal is inconsistent with the NC Coastal Management Program.

— Other (see attached).

State of North Carolina
Department of Environment
and Natural Resources
Division of Marine Fisheries

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
Preston P. Pate, Jr., Director



12 February 1998



MEMORANDUM

TO: Franklin Vick, P.E. Manager
Planning and Environmental Branch
N.C. Division of Highways
P.O. Box 25201
Raleigh, NC 27611-5201

FROM: P.A. Wojciechowski *sh*

SUBJECT: Review of Scoping Sheets for US 70 from Four Lanes at Radio Island to North of
SR 1303 (Pinnars Point Road), Beaufort, Carteret County, State Project No. 8.1162501,
Federal Aid Project No. STPNHF-70(43), TIP No. R-3307

Attached is the Division's reply for the above referenced project. If you have any questions, please don't hesitate to contact me.

PAW/bc
permits\adminisbcover.ltr

- vi) Quality of wetlands impacted.
 - vii) Total wetland impacts.
 - viii) List the 401 General Certification numbers requested from DWQ.
- H. Borrow/waste areas should avoid wetlands to the maximum extent practicable. Prior to the approval of any borrow/waste site in a wetland, the contractor shall obtain a 401 Certification from DWQ.
- I. Please provide a conceptual wetland mitigation plan to help the environmental review. The mitigation plan may state the following:
- 1. Compensatory mitigation will be considered only after wetland impacts have been avoided and minimized to the maximum extent possible.
 - 2. On-site, in-kind mitigation is the preferred method of mitigation. In-kind mitigation within the same watershed is preferred over out-of-kind mitigation.
 - 3. Mitigation should be in the following order: restoration, creation, enhancement, and lastly preservation.
- J. The EA should discuss in detail project alternatives that alleviate traffic problems without road widening, such as mass transit and traffic congestion management techniques.
- K. The North Carolina Environmental Policy Act (SEPA) requires that the EA for this project evaluate all direct, indirect and cumulative impacts on the environment. It is the relationship between transportation projects and their impacts to changes in land uses that the EA should focus its indirect impacts section. This section of the EA should discuss the known relationship between road widening and inducements for urban development along the project right-of-way. The EA must further address the long-term environmental impacts of this road project, including the potential indirect impacts of the induced urban development on all aspects of the environment. To address this issue, the EA should answer the following questions -
- i) What is the estimated traffic projections for the project corridor (and what land use figures were used in this estimate)?
 - ii) Will this project provide additional traffic handling capacity and/or improved traffic safety and control features to existing roads, such as turn lanes and traffic signs and signals?
 - iii) Are any cross streets in the project area projected to see additional traffic flows due to the proposed project? If so, how will land uses along these secondary roads be influenced by the project?
 - iv) How does this project comply with local governments' land use and metropolitan transportation plans?
 - v) Will this project provide new or improved access to vacant parcels of land in the road right-of-way?
 - vi) Will these once less-developable parcels become more likely to develop into urban uses with the provision of public road access, adequate road frontage or traffic safety and control features from the project?
 - vii) Will this widened road serve as an inducement to additional urban development in the project right-of-way, given the provision of additional traffic handling capacities, and the existence (or likelihood of existence in the future), of other essential public infrastructure improvements (e.g. sewer, water and electricity) in the area? To what degree will this widening encourage further urbanization of this corridor?



North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

July 21, 1998

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Planning and Environmental Branch
Division of Highways
Department of Transportation

FROM: David Brook *David Brook*
Deputy State Historic Preservation Officer

SUBJECT: US 70 from Radio Island to north of
Pinners Point Road, Beaufort, Carteret
County, R-3307, Federal Aid Project No.
STPNHF-70(43), State Project
8.1162501, 98-E-4220-0833



We have received information concerning the above project from the State Clearinghouse.

We have conducted a search of our maps and files and have located the following structures of historical or architectural importance within the general area of the project:

Beaufort Historic District (CR 1). Listed in National Register.

Beaufort Local Historic District (CR 561). Locally designated historic district.

Carteret County Home (CR 226), west side of NC 101, 0.2 mile north of junction with SR 1170. Listed in National Register.

Washburn Seminary Trades Training Workshop (CR 631), northeast corner of Cedar and Queen Streets. Included on state study list.

In addition, Peter Sandbeck conducted a survey of Beaufort's historic African American resources in 1995 and identified an eighteen-block area that may contain properties that are eligible for listing in the National Register of Historic Places.

We recommend that an architectural historian with the North Carolina Department of Transportation evaluate the Washburn Seminary Trades Training Workshop and the African American resources for National Register eligibility and report the findings to us.



7/23/98

Page 4

- M. DWQ is also concerned about secondary wetland impacts. For DWQ to concur with an alternative in the mountains or the piedmont, DOT will need to commit to full control of access to the wetland parcels or DOT to purchase these parcels for wetland mitigation.
- N. Please note that a 401 Water Quality Certification cannot be issued until the conditions of NCAC 15A: 01C.0402 (Limitations on Actions During NCEPA Process) are met. This regulation prevents DWQ from issuing the 401 Certification until a FONSI or Record of Decision (ROD) (for and EIS) has been issued by the Department requiring the document. It is recommended that if the 401 Certification application is submitted for review prior to the sign off, the applicant states that the 401 should not be issued until the applicant informs DWQ that the FONSI or ROD has been signed off by the Department.

Written concurrence of 401 Water Quality Certification may be required for this project. Applications requesting coverage under our General Certification 14 or General Permit 31 (with wetland impact) will require written concurrence. Please be aware that 401 Certification may be denied if wetland or water impacts have not been avoided and minimized to the maximum extent practicable.

Please have the applicant call Cyndi Bell at 919-733-1786 if they have any questions on these comments.

mek:\980833; US 70 Scoping

cc: Cyndi Bell - DWQ- ESB, Ecological Assessment Group

J.C. Stanley Grocery Store is eligible for listing in the National Register under Criterion A for its association with the commercial development of the African American community in Beaufort. We concur with the boundaries noted on page 37 of the report.

Scott's Grocery is eligible for listing in the National Register under Criterion A for its association with the commercial development of the African American community in Beaufort. We concur with the boundaries noted on page 41 of the report.

Beaufort Graded School is eligible for listing in the National Register for its association with educational development in Carteret County as it was the first consolidated school in the county. The Beaufort Graded School is also eligible under Criterion C for architecture as a rare example of Style Moderne and Art Deco architecture. We concur with the boundaries noted on page 46 of the report.

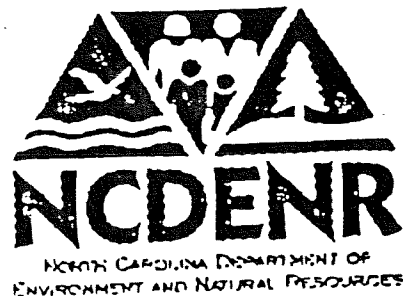
Ward-Hancock House is eligible for listing in the National Register under Criterion C for architecture as representative of the type of house constructed in the second half of the eighteenth century in Carteret County and as the only house with an intact gambrel roof remaining in Beaufort. We concur with the boundaries noted on page 52 of the report.

The following determined not eligible for listing in the National Register:

717 Mulberry Street
Collins Oden House
717 Pine Street
William P. Davis House

State of North Carolina
Department of Environment
and Natural Resources
Division of Marine Fisheries

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
Preston P. Pate, Jr., Director



H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
N.C. Department of Transportation
P.O. 25201
Raleigh, N.C. 27611-5201

Dear Mr. Vick:

SUBJECT: Review of Scoping Sheets for US 70 from Four Lanes at Radio Island to North of SR
1303 (Pingers Point Road), Beaufort, Carteret County, State Project No. 8.1162501,
Federal Aid Project No. STPNHF-70(43), TIP No. R-3307

I have reviewed the scoping sheets of the above project and have no significant comments to make. From the map included, the high rise will cross some shellfish habitat, however this is closed due to pollution. It is open to harvest for relay a few times a year. I do suggest that any streams or canals this bridge project impacts should be culverted, not filled in.

Because I have no significant comments to make, I will not be attending the scoping meeting.
Thank you for allowing me to comment on this project.

Sincerely,

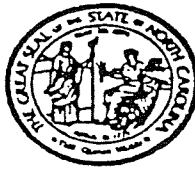
Patricia L. Murphey
Marine Biologist I
N.C. Division of Marine Fisheries

William D. Gilmore
Page 3
Carteret R-3307

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763

cc: B. Church
E. Davis



North Carolina Department of Cultural Resources
State Historic Preservation Office

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

December 2, 1999

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook *DB*
Deputy Historic Preservation Officer

SUBJECT: Improvements to US 70 from Radio Island to north of SR 1303 Beaufort.
TIP No. R-3307. Carteret County. ER 00-7516

Thank you for your letter transmitting the survey report by Ed Davis concerning the above project.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following properties are eligible for the National Register of Historic Places under the criterion cited:

Washburn Seminary Trade Training Workshop (CR 284) is individually eligible for listing in the National Register under Criterion A for its association with the early education and training of African Americans. *NOTE:* The boundary description for the Washburn Seminary Trade Training Workshop indicates that it lies one half block to the east of the (expanded) Beaufort Historic District. This building is within the Beaufort Historic District and is identified as a contributing structure.

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763/733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342/715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547/715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4618 Mail Service Center, Raleigh NC 27699-4618	(919) 733-6545/715-4801

W. D. Gilmore
July 21, 1998, Page 2

There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for inclusion in the National Register of Historic Places will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:slw

cc: State Clearinghouse
N. Graf
B. Church
T. Padgett
Beaufort Historic Preservation Commission

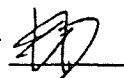
Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

BRIDGE LOCATION [ALTERNATIVES 1A, 1B, 1D, 1E - ADVERSE EFFECT TO HISTORIC DISTRICT (NR)
ALTERNATIVE 3A - ADVERSE EFFECT TO HISTORIC DISTRICT (NR)
ALTERNATIVE 2 BRIDGE LOCATION - NOT ADVERSE
ALTERNATIVE 3 - ADVERSE EFFECT TO HISTORIC DISTRICT.
ALTERNATIVES 1A, 1B, 2A, 2B - ADVERSE EFFECT TO C.C. HOME (NR)
" 1D, 1E, 2D, 2E " " " " "
ALTERNATIVE 1A, 1B, 2A, 2B MAY BE THE EASIER ALTERNATIVES TO MITIGATE.
ALTERNATIVE 3A - ADVERSE on WASHBURN Seminary & BEAUFORTELEM. School
Reason(s) why the effect is not adverse (if applicable).
"

Initialed:

NCDOT



FHWA

MCD

SHPO



CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Expand US 70 from Radio Island to north of Pinners Point in Beaufort, Carteret County. The existing drawbridge will be Replaced.

On August 17, 2000, representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
☐ Federal Highway Administration (FHWA)
☒ North Carolina State Historic Preservation Office (SHPO)

reviewed the subject project and agreed


☐ there are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.

☐ there are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.

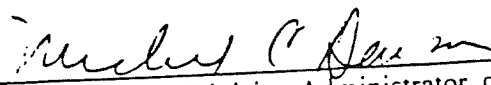
☒ there is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.

☐ there is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

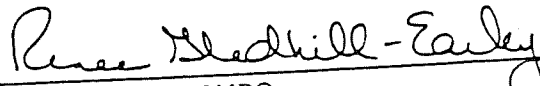
Signed:


Representative, NCDOT

1/18/2001
Date


FHWA, for the Division Administrator, or other Federal Agency

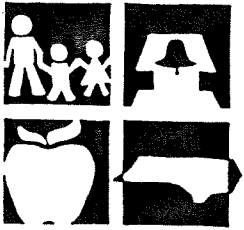
2/7/01
Date


Representative, SHPO

1/18/01
Date


State Historic Preservation Officer

1/19/01
Date



Public Schools of North Carolina

State Board of Education
Phillip J. Kirk, Jr., Chairman

<http://www.dpi.state.nc.us>

Department of Public Instruction
Michael E. Ward, State Superintendent

July 10, 1998

MEMORANDUM

TO: Mark Reed, NC Department of Transportation

FROM: Gerald H. Knott, Section Chief, School Planning *GHK*

SUBJECT: US 70, From Four lanes at Radio Island to North of Pinners Point Road (SR 1303), Beaufort, Carteret County, Federal Aid Project No. STPNHF-70(43). State Project No. 8.1162501, TIP No. R-3307

Enclosed is the response from Carteret County Schools to our impact inquiry.

/ed
Enclosure

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR
THE NATIONAL REGISTER OF HISTORIC PLACES

Project Description:

On 12/21/2000 representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
☒ Federal Highway Administration (FHWA)
☒ North Carolina State Historic Preservation Office (SHPO)
☐ Other

reviewed the subject project at

- ☐ Scoping meeting
☒ Historic architectural resources photograph review session/consultation
☐ Other

All parties present agreed

- ☐ there are no properties over fifty years old within the project's area of potential effects.
☐ there are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
☒ there are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as ~~(List Attached)~~ is considered not eligible for the National Register and no further evaluation of it is necessary. #1, #2, #3
☐ there are no National Register-listed properties within the project's area of potential effects.
☐ all properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Signed:

[Signature]
Representative, NCDOT

12/21/2000
Date

[Signature]
FHWA, for the Division Administrator, or other Federal Agency

12/21/00
Date

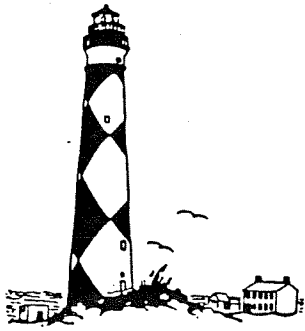
[Signature]
Representative, SHPO

12/21/00
Date

[Signature]
State Historic Preservation Officer

12/21/00
Date

If a survey report is prepared, a final copy of this form and the attached list will be included.



Carteret County Schools

P.O. Box 600
Beaufort, N.C. 28516
(919) 728-4583

10/10/98

MEMO FO NO. 4293

DATE: 7/7/98

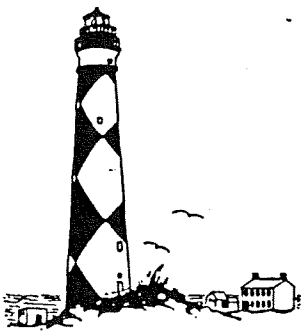
TO: Gerald H. Knott, AIA
Section Chief, School Planning

FROM: J. Ipock, Finance Officer

RE: DOT State Project No. 8.1162501, TIP No. R-3307

In reviewing the proposed project it appears Alternatives 1A & 1B and 1C & 1D are located very close to Beaufort Middle School, which sits at the corner of Carraway and Campen roads. If these alternatives are selected, they present at least 2 problems we see immediately. First is the traffic flow and access problem into the school site. There should be turning lanes for school busses and student drop-off and pickup. This could and very likely will require some type of traffic signal. This will also create congestion from 7:45am to 8:30am and 2:45pm to 3:30pm at this new intersection. Secondly, these alternatives also limit the expansion of the school site. We are currently looking to expand this site for athletic facilities and playing fields. We currently only have enough room for a baseball/softball field and are planning to acquire enough property for a football field and soccer field. These alternatives would severely limit any plans for expansion and depending on where the traffic access into the school site is located could take the current playing field.

Based on the above reasons, and others not apparent at this time, we would ask that alternatives 1A & 1B and 1C & 1D NOT be used. Please call me if you have questions or require further information.



Carteret County Schools

P.O. Box 600
Beaufort, N.C. 28516
(919) 728-4583

13/1998

MEMO FO NO 4296

DATE: 7/9/98

TO: Gerald H Knott, AIA
Section Chief, School Planning

FROM: J. Ipock, Finance Officer *J. Ipock*

RE: DOT State Project No. 8.1162501, TIP No. R-3307

Upon a further, more in-depth, review of the project, the Queen Street Connector runs directly through our Maintenance and Transportation Department site. Our site begins at the end of the current paved portion of Queen Street. This is the main entrance to our facility and is used for school busses, large equipment and tractor-trailer deliveries. The extension of Queen Street would also cut our bus storage area by more than 1/3. Our best guess is that the end of our warehouse would be less than 5 feet from the street. Also a delivery truck would not fit between the street and our loading dock. We have tractor-trailer delivery trucks in on almost a daily basis. School buses arrive and depart on a regular basis from our transportation facility every day of the school year. We feel the congestion would slow the flow of traffic at this site and could be a danger area on this soon to be busy street. Could this connector street be moved to the next street east?

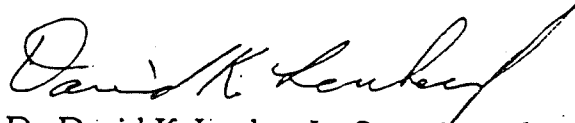
Could you please send me a to scale drawing of the new Queen Street so it can be further reviewed on a more detailed basis? This would very helpful for planning purposes if the connector street stays as planned.

I am sorry we did not pickup on this sooner. Please let me know if you have any questions.

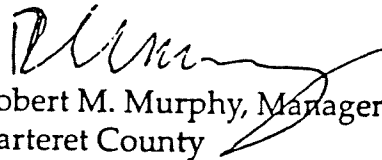
We have attached a preliminary drawing by the Department of Transportation to show the only viable alternative. We are requesting that you design the intersection on the north side of the Carteret County Home as depicted on this drawing.

We look forward to receiving the final drawings. Please be assured we will work with you on this project. By working together, we can provide a good road, a much needed elementary school and expanded public use athletic fields for county residents.

Sincerely,



Dr. David K. Lenker, Jr., Superintendent
Carteret County Public School System



Robert M. Murphy, Manager
Carteret County

Attachments

tm

Mail
Room



Dr. David K. Lenker, Jr.
Superintendent

Jane R. Alexander
Assistant Superintendent

John A. Welmars, Jr.
Assistant Superintendent

Carteret County Board of Education

P.O. Box 600, Beaufort, NC 28516-0600

252-728-4583 / 252-728-3028 FAX

<http://www.clis.com/ccs/>

Roger Newby
Chairman

Kim Willis
Vice Chairman

June Fulcher
Mike Hodges
Cathy Neagle
Ellen Piner
Arnold Stone

April 20, 2000

William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch
P.O. Box 25201
Raleigh, NC 27611

Dear Mr. Gilmore:

We are writing regarding TIP Project No. R-3307, titled US 70 from Four Lanes at Radio Island to North of Pinners Point Road (SR 1303) in Beaufort, Carteret County.

All currently designed bypass alternatives around Beaufort will affect property the Carteret County Commissioners and the Carteret County Board of Education plan to purchase for a new elementary school and community/public athletic fields. After years of searching, we are currently negotiating a price on the property, which is at the junction of Highway 101 and Carraway Drive and is beside the existing Beaufort Middle School.

We met this morning with Department of Transportation Representatives Bob Mattocks, Mark Reep, Lynn Miller and Neil Lassiter. Others attending the meeting included Carteret County Board of Commissioners Chairman Doug Brady and Carteret County Public School System Finance Officer J. Ipock. During the meeting, we expressed our concerns about alternative proposals 1A, 1B, 2A and 2B and asked that the proposed intersection at Highway 101 be moved north of the Carteret County Home, a designated National Historic Site. We were pleased that Department of Transportation Representatives noted that this was feasible.

Please note the Carteret County Board of Commissioners and the Carteret County Board of Education plan to proceed with the purchase of this property and construct the new elementary school and the athletic fields. The title for this land will be held by the County of Carteret.

There is a great need to immediately replace the town's existing elementary school and, after extensive studies in a water-locked town, this site is the only site that is suitable. By moving the intersection of the bypass on Highway 101 north, there would be no impact on this land, which will include two schools and public use athletic fields.

MISSION

THE MISSION of the Carteret County Schools is to graduate all students, prepared to be productive citizens.



Carteret County is a member of the Global TransPark Development Commission and North Carolina East

**2000-2001
Board of Directors**

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Michael Coyle
Bally Refrigerated Boxes

Vice-President

Chris Lindelof
First Flight
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Dr. Joseph Barwick

Carteret Community College

Doug Brady

Carteret County
Board of Commissioners

John Gainey

BB&T Insurance Services

Gaye Mashburn

Wellons Enterprises

Gabriele Onorato

Open Grounds Farm

Randy Ramsey

Jarrett Bay Boatworks

Dan Reitz

Henry's Tackle, LLC

Al Williams

Al Williams Properties

Bob Murphy

Carteret County Manager
ex-officio

Adrienne H. Cole

Executive Director

3615 Arendell Street

P. O. Box 825

Morehead City NC 28557

252.222-6120

800.462.4252

FAX 252.222-6124

edc@carteret.cc.nc.us

www.carteretedc.com

December 8, 2000

Mr. Mark Reep

Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mark:

I am writing on behalf of the Carteret County Transportation Committee to stress the need to move forward with the replacement of the Gallants Channel Bridge project in Carteret County. As you are aware, the replacement of the bridge has been the Transportation Committee's number one transportation priority since 1994 because of its importance to Carteret County, the Port of Morehead City and as a critical link in the US 70 corridor from Raleigh to the Port.

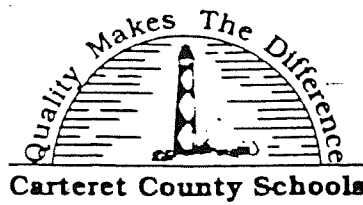
Because of its importance, the Transportation Committee, during their October 30, 2000 meeting, approved a resolution supporting the replacement of Gallants Channel Bridge and recommending the most northern route identified by NCDOT as its preferred location for the bridge and connector route. A copy of the resolution is enclosed with this letter.

The Transportation Committee's recommendation was presented to the Carteret County Board of Commissioners at their November 20, 2000 board meeting and the Commission unanimously endorsed the Transportation Committee's resolution. It is critically important that, after many delays, this project stay on schedule. Construction on the bridge is currently scheduled to commence beyond the 2008 TIP planning window, by which time, the county will be facing a crisis situation.

If you have any questions about the Committee's action or have any suggestions of how we can be of assistance to your staff, please do not hesitate to contact me at 1-800-462-4252.

Sincerely,

Adrienne H. Cole
Secretary/Treasurer
Carteret County Transportation Committee



Dr. David K. Lenker, Jr.
Superintendent

Jane R. Alexander
Assistant Superintendent

John A. Welmers, Jr.
Assistant Superintendent

Carteret County Board of Education

P.O. Box 600, Beaufort, NC 28516-0600

252-728-4583 / 252-728-3028 FAX

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Roger Newby
Chairman

Cathy Neagle
Vice Chairman

Bill Blair
June Fulcher
Mike Hodges
Ellen Piner
Arnold Stone

September 19, 2000

Mark L. Reep, P.E., Project Development Engineer
NCDOT Project Development and Environmental Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Reep:

Thursday's information meeting for local officials was beneficial, and I want to thank you for organizing that meeting. The proposed Beaufort project (TIP No. R-3307) is important to many people for various reasons.

As the Superintendent of the Carteret County Public School System, I am writing to again express my desire for you to select an alternative that does not cut across school system property. As you are aware, the Carteret County Board of Education has purchased land beside Beaufort Middle School for the construction of a new elementary school along with recreation fields and play areas for area residents. That land stretches northeast from Carraway Drive. A set of Alternatives cut directly through that land and another set cut across the northern part of that land. I am requesting that you select either Alternative 1D or 2D which pass north of the property and do not cut across the land.

Please feel free to contact me if you have questions about this request. I appreciate the North Carolina Department of Transportation's continued support of the Carteret County Public School System.

Sincerely,


Dr. David K. Lenker, Jr.
Superintendent

MISSION

THE MISSION of the Carteret County Schools is to graduate all students, prepared to be productive citizens.

BE IT FINALLY RESOLVED that, barring any insurmountable environmental or engineering impacts, the Carteret County Transportation Committee prefers the most northerly route as the location of the Gallants Channel Bridge and accompanying approach roads. It should be noted that the preference of the most northerly route does not exclude any of the other routes previously identified by the North Carolina Department of Transportation.

ADOPTED, this the 30th day of October 2000


Derryl Garner, Chairman
Carteret County Transportation Committee

RESOLUTION
SUPPORTING THE REPLACEMENT OF GALLANTS CHANNEL BRIDGE
(R-3307) AND RECOMMENDING A PREFERRED LOCATION

WHEREAS, the Carteret County Board of Commissioners established the Carteret County Transportation Committee in 1997 for the purpose of identifying the critical transportation needs of the county and prioritizing those needs in a recommended Transportation Improvement Program; and

WHEREAS, the twenty-seven member transportation committee includes representatives from all of the municipalities in the county as well as other important stakeholders, such that the Committee's recommendations reflect a county consensus; and

WHEREAS, the Carteret County Transportation Committee, after careful and deliberate consideration, recommended a Transportation Improvement Program (TIP) that placed the Gallants Channel Bridge project as the top priority, the same priority the project has enjoyed in the county's TIP since 1994; and

WHEREAS, the project was chosen as the top priority because of the need to improve current traffic congestion but also to complete a vital component of the upgrade of US 70 from Raleigh to the Morehead City Port; and

WHEREAS, this recommendation was unanimously ratified by the County Commission and all of the Commissions of all of the municipalities in the county in November 1997; and

WHEREAS, the North Carolina Department of Transportation has included replacement of the Gallants Channel Bridge in the state Transportation Improvement Program; and

WHEREAS, the North Carolina Department of Transportation has examined all the possible alternatives for the location of the replacement bridge and its accompanying approach roads and has selected those alternatives that are the most reasonable for further study; and

WHEREAS, the replacement of Gallants Channel Bridge has been the subject of study and public comment for several years.

NOW, THEREFORE, BE IT RESOLVED that the Carteret County Transportation Committee urges the North Carolina Department of Transportation to limit its further study of proposed bridge and approach road locations to those alternatives having already been identified as the most feasible; and

BE IT FURTHER RESOLVED that, because of the importance of the project to Carteret County, the North Carolina Port at Morehead City and all of eastern North Carolina, the North Carolina Department of Transportation move forward with the selection of the project location as quickly as possible recognizing that further delay will increase the cost of the project; and

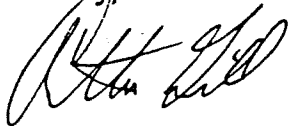
R-3307

page 2

In conversation with my board, the Beaufort-Morehead City Airport Authority supports the construction of a replacement Gallants Channel Bridge. We are willing to cooperate with all the plans presented so far including some re-configurations of runways and closing of the runways during construction if needed.

Please feel free to contact me if we can be of assistance to you.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Arthur Gill', written over a horizontal line.

Arthur Gill, Chairman
Beaufort-Morehead City Airport Authority

cc: Board Members
Mark Esposito, NC DOT-Aviation Division



Beaufort-Morehead City Airport Authority

Post Office Box 875
Beaufort, North Carolina 28516-0875

January 25, 1999

Mark L. Reep
N.C. DOT
P.O. Box 25201
Raleigh, NC 27611-5201

Reference: R-3307, Beaufort, NC

Dear Mark,

I have reviewed your most recent drawings for the above project showing all possible routes for this project. I have a number of concerns relating to the airport. These concerns are for your information and are not to be considered as opposition to the project.

First, at the end of Section C and the beginning of Section O is the end of Runway 03. The landing threshold for this runway is presently displaced because of West Beaufort Rd. If the new road is closer to the end of the runway or higher than the present road, the threshold will likely be moved again and therefore shortening the runway, however, this would not be as significant if we are able to extend Runway 08-26.

Second, Section O will cause the removal of privately owned hangars on private land. This will displace fifteen (15) aircraft. The replacement of these hangars will be a problem. The Airport Authority with the encouragement of the FAA has a policy of no new off airport property hangars and presently there is not enough property available if they were allowed. The property for construction of new hangars on the airport is also limited, as well is funds from Carteret County.

Third, Section O also concerns the end of Runway 32. The threshold of this runway has a considerable displacement because of the trees at the end of the runway. It is our hope that the new road, whether Sections O, M, N, or K are used, will be close enough to remove the obstacles, but far enough away to allow the full use of the runway.

I hope the comments are helpful. If you need the distances for clearances from the runways, Mark Esposito with the Aviation Division should be able to help you.

Town of Beaufort

April 18, 2000

Mr. Mark Reep
N.C. D.O.T.
Division of Highways
P.O. Box 25201
Raleigh, N.C. 27611

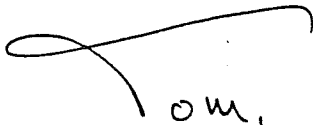
Dear Mark,

It was surprising to see the cost estimate on the tunnel proposal across Gallants' Channel. I want to thank all of those involved with developing the estimates for their time and effort.

The tunnel project attempted to alleviate the traffic congestion over the Grayden Paul Bridge, allow access to downtown Beaufort via the Grayden Paul Bridge eliminating the two proposed access roads of Queen and Pollock Streets, and maintain the scenic view over Gallants' Channel. It also had a lower impact on the Maritime Museum project and the airport runway than a high rise bridge.

Now with the tunnel option cost prohibiting the second best option would be replacing the two lane tunnel with a two lane high rise bridge and keeping the Grayden Paul Bridge as the main entrance into Beaufort. I realize D.O.T. would prefer a four lane bridge and eliminate the existing bridge, but there are a lot of residents that do not support a four lane bridge, do not support the Queen and Pollock Street exits, but do support the existing bridge as the entrance into our lovely historic town.

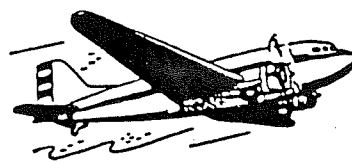
Would you please consider the proposal of a two lane high rise bridge and leaving the existing bridge as the main entrance into Beaufort?



Mayor Thomas Steepy

Intracoastal
Waterway

Gallant's
Channel Site



Michael J. Smith Field

W. BEAUFORT RD.

GALLANTS
CHANNEL

TOWN
CREEK

H W Y 7 0



◀ to Morehead City

Beaufort, NC

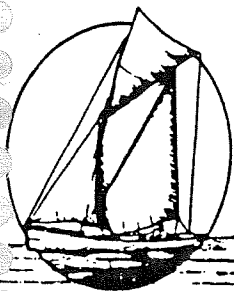
NOAA Lab

Duke
Marine
Lab

Existing
Downtown
Museum Complex

TAYLORS
CREEK

Rachel Carson
Estuarine Sanctuary



North Carolina Maritime Museum

George Ward Shannon, Jr., Ph.D.
Director

12/2/98

Mr. Mark Reep
North Carolina Department of Transportation
Planning and Environmental Branch
PO Box 25201
Raleigh, North Carolina 27611

Dear Mr. Reep:

Thank you for informing me of DOT's proposed alternative that may possibly result in a new route for the Gallant's Channel High Rise Bridge that would bring it down very close to our newly acquired 36 acre Gallant's Channel property. In response to your questions about the development plan for the 36 acre North Carolina Maritime Museum Gallant's Channel Annex I have enclosed two documents for your records. The first document shows the location of our property on West Beaufort Road. The second document provides you with our development plan for the property. It is our museum's goal to develop into the premier maritime museum in the south on this 36 acre parcel! Given our plan to have tall ships dock along our 2000 linear feet of deep water frontage, I do not believe that it is in the museum's best interest to have a tall bridge come down on our property between us and the Town Creek Marina. That proposed route would greatly diminish the utility and esthetics of our deep water frontage area and thereby diminish the museum's ability to promote heritage tourism to help our community grow.

I am,

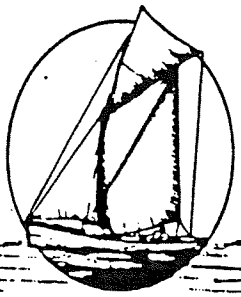
Sincerely yours,

George Shannon

George Ward Shannon, Jr., Ph.D.
Director, North Carolina Maritime Museum

cc:

Betty Ray McCain, Secretary, Department of Cultural Resources
Elizabeth F. Buford, Deputy Secretary, Department of Cultural Resources
Dr. Jeffrey J. Crow, Director, Division of Archives and History
Grayden Paul, President, Friends of the North Carolina Maritime Museum
Dr. John Costlow, Vice-President, Friends of the North Carolina Maritime Museum



North Carolina Maritime Museum

George Ward Shannon, Jr., Ph.D.
Director

2/26/99

Mr. Mark Reep
North Carolina Department of Transportation
Planning and Environmental Branch
PO Box 25201
Raleigh, North Carolina 27611

Dear Mr. Reep:

I discussed with Dr. John Costlow DOT's request for information concerning title, acreage, the survey plat map, and expenditures paid by the Friends for the 36.6 acre North Carolina Maritime Museum Gallant's Channel Annex. Dr. Costlow, President of the Friends of the North Carolina Maritime Museum informed me that the Friends would like to gather more information before they respond to DOT with their damage claim.

Since the title of the property in question is currently held by the Friends, they would like DOT to correspond with them regarding the proposed alternate 4 route for the Gallant's Channel bridge across their property. Please address your correspondence to:

Dr. John Costlow
President
Friends of the North Carolina Maritime Museum
315 Front Street
Beaufort, North Carolina 28516

I am,

Sincerely yours,

George Shannon

George Ward Shannon, Jr., Ph.D.
Director, North Carolina Maritime Museum

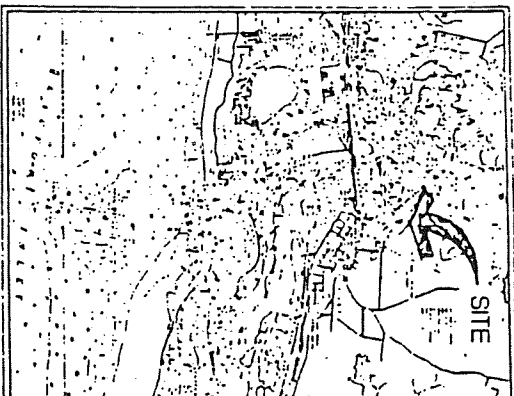
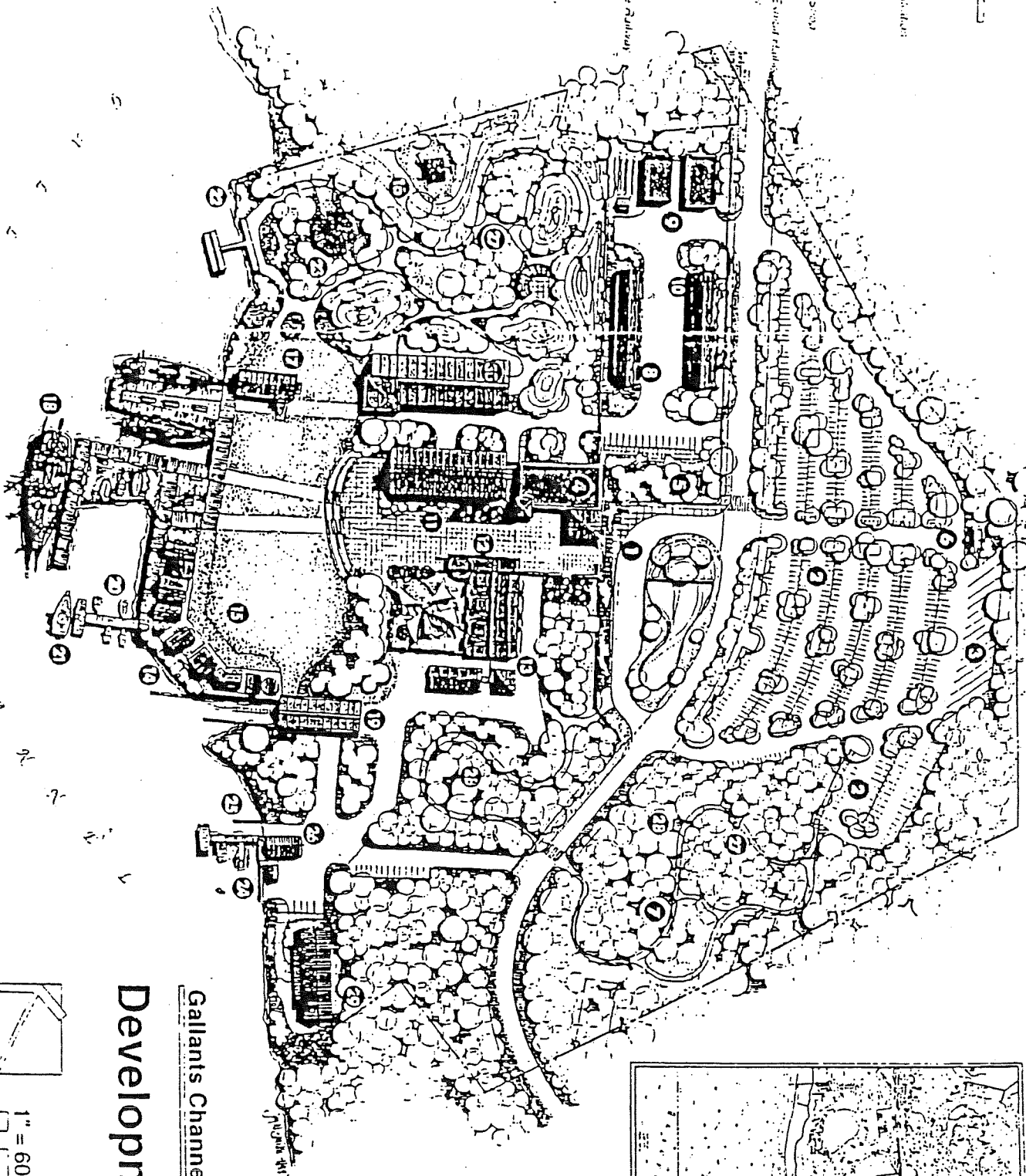
cc:

Betty Ray McCain, Secretary, Department of Cultural Resources
Elizabeth F. Buford, Deputy Secretary, Department of Cultural Resources
Dr. Jeffrey J. Crow, Director, Division of Archives and History
Dr. John Costlow, President, Friends of the North Carolina Maritime Museum

Legend

- 1 Main Entrance
- 2 Parking
- 3 Gas Pumping
- 4 Ticketing Center and Administration
- 5 Future Addition Site
- 6 Gas Oil and Fuel
- 7 Public Building
- 8 Boat Storage
- 9 Marine Service and Repair Shop
- 10 Boat Repair Shop
- 11 Boat Storage
- 12 Boat Storage
- 13 Boat Storage
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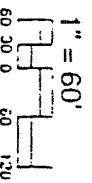
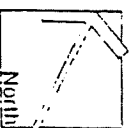
PAKINS Associates, P.A.
 101 Triangle Park, North Carolina



Vicinity Map

Gallants Channel Site Development Plan

North Carolina
 Maritime Museum
 Beaufort, NC



One A

From planning documents dating back to 1992, we were aware of the possibility of a high-rise bridge across Gallants Channel to replace the existing drawbridge. Until just the last few months however, there has never been any suggestion of a possible routing of the bridge over our property. Had this been known, we would never have proceeded with the project, particularly soliciting our legislators and private contributors for funding to support the purchase of the Gallants Channel property.

Your proposed routing negatively impacts almost 10 acres of our property and destroys the conservation lab, docks and Jr. Sailing facilities just recently installed. Even worse, it eliminates approximately 600 ft. of valuable waterfront with its associated riparian rights extending to the channel that leads into Town Creek Marina from Gallants Channel. Further a high-rise bridge practically over the top of our property is hardly appropriate for the serene park-like setting we envisioned for this site. Unless D.O.T. knows of some way to replace the impacted property and associate water rights we do not believe it is possible to develop the Gallants Channel property into the vision we all have for a magnificent N. C. Maritime Museum complex.

It is our belief that the developed Gallants Channel Site will have a major favorable economic impact on the local community. We expect over 1/2 million visitors per year by 2010.

The N.C. Maritime Museum would be a destination point for visitors from all over the country. Our planning provides for parking, which is a critical issue for the town of Beaufort. D.O.T. proposed access to our property from the bridge roadway is completely unacceptable. Visitors coming in from the West would have to cross two lanes of traffic. Planned shuttle operation between the Gallants Channel Site and downtown Beaufort would be almost impossible with tram style shuttle buses having to enter and exit a four-lane high-speed throughway.

The Friends of the Museum will be glad to work with D.O.T. in any way possible to solve this problem. We just do not want to see the opportunity of a lifetime for the N.C. Maritime Museum sacrificed to a routing for a bridge, which could be directed elsewhere. It would be greatly appreciated if we could meet with you to discuss this problem and perhaps receive some guidance, which could help in any future deliberations.

Respectfully,
Friends of the Museum Board

Dr. John Costlow, President

John Costlow
Charles Bolton, Vice President

Mary Bierly, Secretary

Mary Bierly

Anna Doughton, Member-at-Large

A.D.

Grayden Paul, Past President

Grayden Paul
Michael Bradley, Treasurer

MB

Marlene Anderson, Member-at-Large

Marlene Anderson

Friends of the Museum

North Carolina Maritime Museum, 315 Front Street, Beaufort, North Carolina 28516. (252) 728-7317

MAR 23

March 19, 1999

Mr. Bob Maddox
P.O. Box 156
Pollocksville, NC 28573

Dear Mr. Maddox,

This letter is directed to you as the senior D.O.T. representative for this area. The Friends of the Museum would like to express their strong opposition to D.O.T.'s proposed alternate 4 for the Gallants Channel high-rise bridge, which would cross our property. To better understand our position, a little background on our role in this matter seems to be in order.

We are a 501(C)(3) non profit volunteer organization of some 1400 members state-wide whose purpose is to support the North Carolina Maritime Museum through contribution of services, advice and council and money. Formed in 1979, the Friends have been the largest contributors to the Museum from its start as a small storefront operation on Turner Street in Beaufort, to its position today as a fully accredited N.C. Maritime Museum.

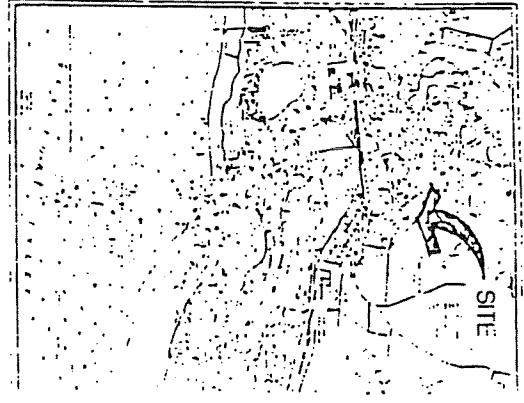
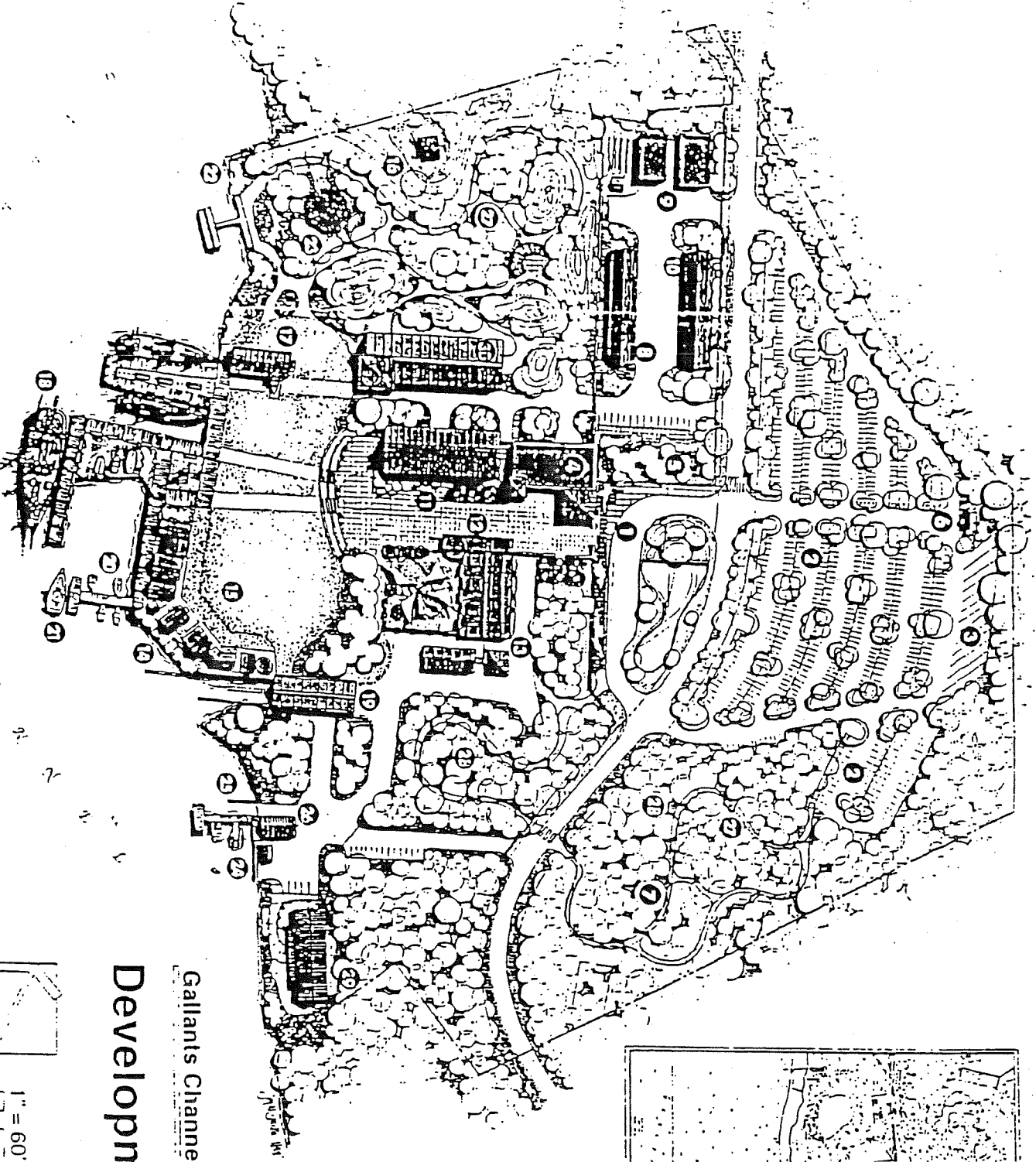
In the early 1990s, it was recognized that the Museum's major obstacle to further growth and development was lack of physical space. The Museum's downtown facilities are surrounded by commercial properties with no space to add new buildings.

At the urging of then Director, Rodney Barfield, the Friends began the task of seeking out properties for expansion. A number of opportunities were explored but none turned out to be satisfactory or economically feasible. Then in early 1995, a 36-acre tract on Gallants Channel, just one mile from downtown Beaufort was offered to the Museum at what we felt was a reasonable price of \$3.2 million. Although an attractive price, this was a considerable amount of money for the Friends organization whose annual budget was a little over \$225,000. Nevertheless, this site, with around 1500 ft. of deep-water frontage located on Gallants Channel which runs from Taylor's Creek in Beaufort to the Intercoastal Waterway, was an ideal site for our expansion. The opportunities were there for the N.C. Maritime Museum to become the premier Maritime Museum of the South and in the same class as the famous Mystic Seaport Museum in Connecticut. (Note: The Mystic Seaport Museum has revenue of around \$20 million per year and is the major economic catalyst for most of the Connecticut seaboard.)

The Friends made a critical commitment, and over a three-year period, with major financial support from the N.C. General Assembly in 1996 and 1997, was able to purchase this property in July of 1997, with final closure in July of 1998.

Beginning in late 1997, we made significant additional investments in this property including funding a master plan for development and environmental permitting, clearing of the site, building an interim conservation lab with a 100 ft. fixed pier and floating docks, sewer and water systems, roads, Jr. Sailing facilities, etc. This area is ideal for our headquarters for diving operations on the recently discovered site, near Beaufort inlet, of Blackbeard's Queen Anne's

Appendix D.
NEPA/ Section 404 Merger
Agreement Correspondence



Vicinity Map

Gallant's Channel Site

Marine House

Development Plan



1" = 60'

60 30 0 60 120

Scale

**Section 404/NEPA Merger Project Team Meeting Agreement
Concurrence Point No. 2 - Alternatives To Be Studied
In Detail In The NEPA Document.**

State Project No./Federal Project No./ Action ID/TIP No./Title/Description:

8.1162501, STPNHF-70(43), 199800930, R-3307, US 70, Beaufort, Carteret County.

The proposed project is to replace the existing US Highway 70 (US 70) drawbridge with a high-rise bridge and to extend the highway as a multilane facility from four lanes at Radio Island to north of Pinners Point Road (SR 1303).

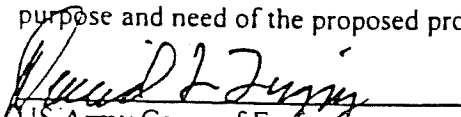
Alternatives (Concurrence - September, 1999):

The project team previously concurred with the alternatives to be carried forward in the environmental document as described in an NCDOT letter dated April 12, 1999 and Corps of Engineers letters dated May 19, 1999 and September 27, 1999. These include Alternatives 2A, 2B, 1A, 1B, 3A, Queen Street Connector, and the Pollock Street Connector. In addition, a two-lane, one-way traffic configuration is to be addressed in the Transportation System Management (TSM) section of the EA.

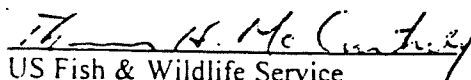
Revised Alternatives To Be Studied In Detail In The NEPA Document:

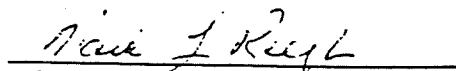
Based on public input and environmental concerns, the alternatives are revised to include Alternatives 2A, 2B, 2D, 2E, 1A, 1B, 1D, 1E, 3A as shown on the attached figure dated March 14, 2001. The Alternative 2 alignments include a connector using existing Turner Street, and the Alternative 1 alignments include a connector using West Beaufort Road and Turner Street. In addition, a two-lane, one-way traffic configuration is to be addressed in the TSM section of the EA.

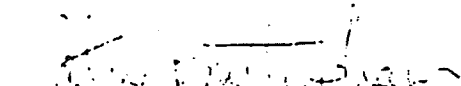
The Project Team has concurred on this date of March 14, 2001 with the "alternatives to be studied in detail" in the NEPA document as stated above. All the alternatives selected, except the no-build alternative, meet the purpose and need of the proposed project.

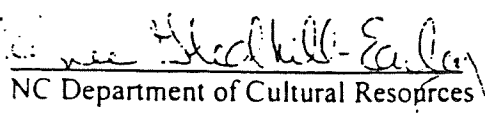

US Army Corps of Engineers

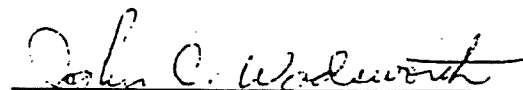
US Coast Guard

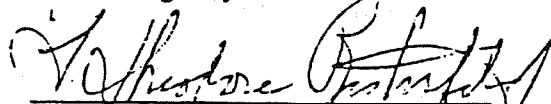

US Fish & Wildlife Service

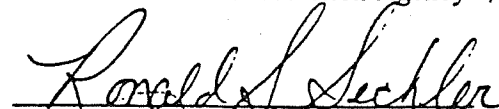

NC Department of Transportation



NC Division of Coastal Management

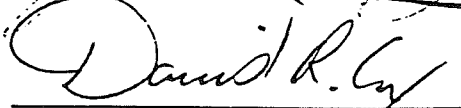

NC Department of Cultural Resources


Federal Highway Administration


US Environmental Protection Agency


National Marine Fisheries Service


NC Division of Water Quality


NC Wildlife Resources Commission

March 14, 2001
Page 1 of 1

Section 404/NEPA Merger Project Team Meeting Agreement
Concurrence Point No. 2 - Alternatives To Be Studied
In Detail In The NEPA Document.

State Project No./Federal Project No./ Action ID/TIP No./Title/Description:

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Revised Alternatives To Be Studied In Detail In The NEPA Document:

Based on public input and environmental concerns, the alternatives are revised to include Alternatives 2A, 2B, 2D, 2E, 1A, 1B, 1D, 1E, 3A as shown on the attached figure dated March 14, 2001. The Alternative 2 alignments include a connector using existing Turner Street, and the Alternative 1 alignments include a connector using West Beaufort Road and Turner Street. In addition, a two-lane, one-way traffic configuration is to be addressed in the TSM section of the EA.

The Project Team has concurred on this date of March 14, 2001 with the "alternatives to be studied in detail" in the NEPA document as stated above. All the alternatives selected, except the no-build alternative, meet the purpose and need of the proposed project.

US Army Corps of Engineers

US Coast Guard

US Fish & Wildlife Service

NC Department of Transportation

NC Division of Coastal Management

NC Department of Cultural Resources

Federal Highway Administration

US Environmental Protection Agency

National Marine Fisheries Service

NC Division of Water Quality

NC Wildlife Resources Commission



NC Division of Marine Fisheries

Section 404/NEPA Merger Project Team Meeting Agreement
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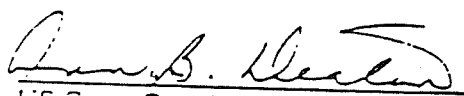
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Based on public input and environmental concerns, the alternatives are revised to include Alternatives 2A, 2B, 2D, 2E, 1A, 1B, 1D, 1E, 3A as shown on the attached figure dated March 14, 2001. The Alternative 2 alignments include a connector using existing Turner Street, and the Alternative 1 alignments include a connector using West Beaufort Road and Turner Street. In addition, a two-lane, one-way traffic configuration is to be addressed in the TSM section of the EA.

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US Army Corps of Engineers


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Federal Highway Administration

US Environmental Protection Agency

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NC Department of Transportation

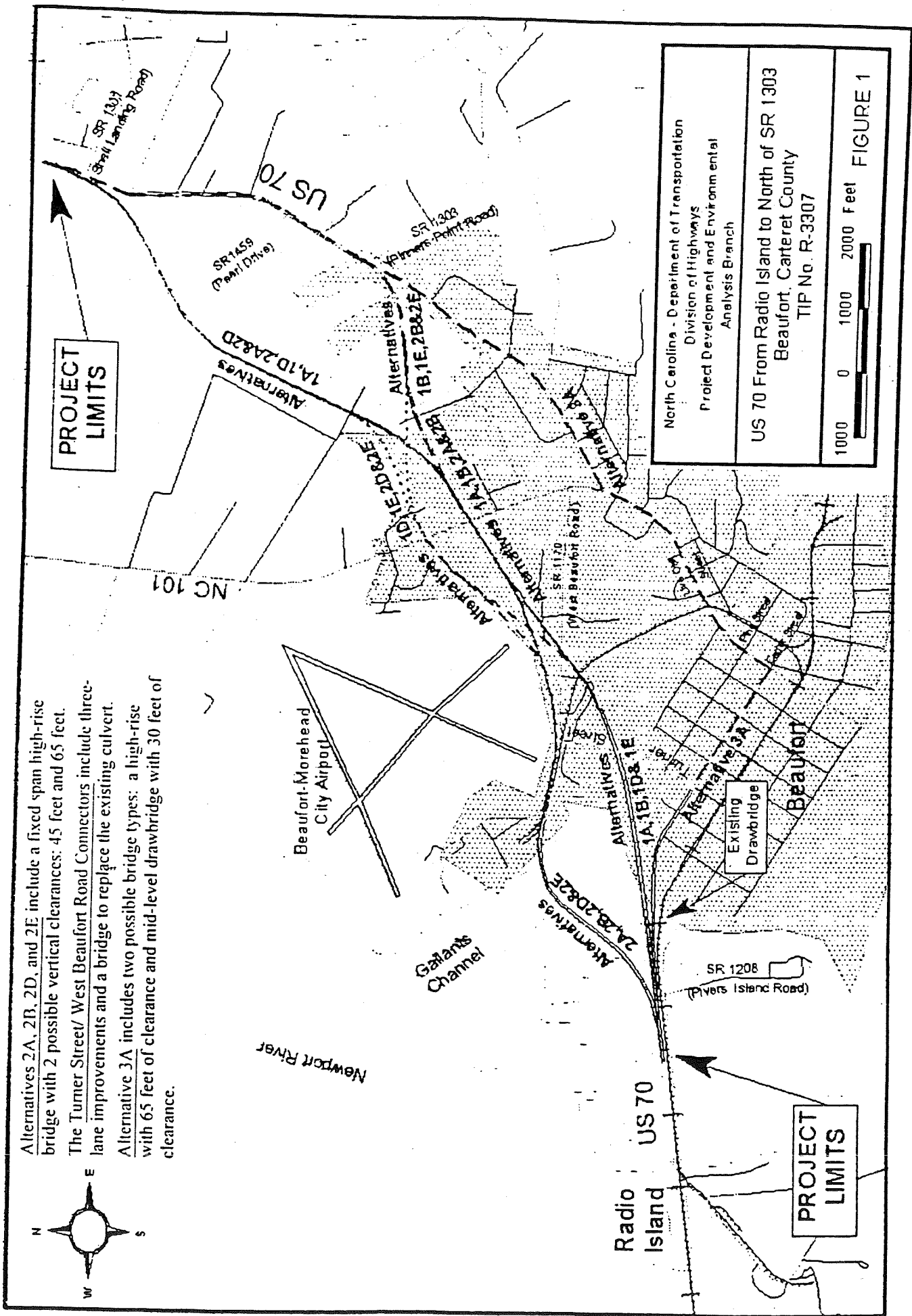
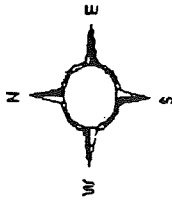
NC Division of Water Quality

NC Division of Coastal Management

NC Wildlife Resources Commission

NC Department of Cultural Resources

Alternatives 2A, 2B, 2D, and 2E include a fixed span high-rise bridge with 2 possible vertical clearances: 45 feet and 65 feet. The Turner Street/ West Beaufort Road Connectors include three-lane improvements and a bridge to replace the existing culvert. Alternative 3A includes two possible bridge types: a high-rise with 65 feet of clearance and mid-level drawbridge with 30 feet of clearance.



U.S. Department
of Transportation

United States
Coast Guard



Commander
United States Coast Guard (Aowb)
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: Aowb
Phone: (757) 398-6227
FAX: (757) 398-6334

16590
20 MAR 01

Mr. Mark Reep, P.E.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Reep:

This is in response to your memorandum dated February 28, 2001, regarding the proposed replacement of the existing bascule bridge across Gallants Channel, mile 0.1, in Beaufort, North Carolina.

Your memorandum and the attachments have been reviewed by Ms. Linda Gilliam of my staff. I have signed the concurrence sheet agreeing that all the alternatives should be studied in detail in the NEPA document. When an alternative has been selected for this project, please ensure that the NEPA document addresses all waterways that will be crossed by the proposed project. The characteristics and navigational use of the waterways should be included in this discussion. By including this information in the NEPA document, we will be in a better position to make determinations as to whether bridge permits will be required for the crossing of waterways other than Gallants Channel.

If you should have any questions regarding this matter, please contact Ms. Linda Gilliam, Bridge Management Specialist, at (757) 398-6227.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ann B. Deaton".

ANN B. DEATON
Chief, Bridge Administration Section
By direction of the Commander
Fifth Coast Guard District

Encl: (1) NCDOT Concurrence Sheet

between Havelock and Beaufort.

Following receipt of the EPA comments, the EPA and the National Marine Fisheries Service (NMFS) were contacted by telephone regarding the EPA comments. These comments were also discussed with the North Carolina Wildlife Resources Commission (WRC). These discussions are summarized as follows:

1. Purpose and Need. The NMFS and WRC concur with the purpose and need of the proposed project. Both of these agencies are familiar with the traffic problems in this area and agree the existing drawbridge is creating traffic congestion due to the opening and closing of the bridge. This problem along with inadequate traffic capacity of US 70 in Beaufort warrants the need for the proposed project. Based on the above, the EPA concurs with the purpose and need for the proposed project.
2. Alternatives 1A and 1B. The NMFS and WRC support retaining Alternatives 1A and 1B. The project team also agreed to retain these alternatives in the meeting of March 12, 1999. Although it is recognized by all the review agencies that these alternatives may have significant impacts to wetlands and residential and commercial shorelines, the estimated impacts of each alternative is not known at this time. Additionally, the Turner Street connector has been dropped due to the significant impacts to high quality coastal marsh. Based on these discussions and the decision to eliminate the Turner Street connector from further analysis, the EPA concurred to retain these alternatives in the DEIS.
3. Alternatives 3B. This alternative would replace the existing drawbridge with a four lane high-rise bridge along the existing location and provide two-lane, one-way traffic configurations using Cedar Street and Pine Street. Neither the town of Beaufort nor the NMFS support this alternative. The NMFS is concerned that Alternative 3B would have significant impacts on the minority area along Pine Street and would not meet the purpose and need for the project. In addition, the project team concurred to drop this alternative in the March 16, 1999 team meeting. During recent telephone discussions, the EPA suggested retaining this alternative as a Transportation Systems Management Alternative (TSM). After further discussion, the EPA, in view of the NMFS concerns, concurred to drop this alternative from further analysis provided the two-lane, one-way traffic configuration portion of Alternative 3B is addressed in the TSM section of the EIS.
4. Alternative 3A. The NMFS supports retaining Alternative 3A as an upgrade existing facilities alternative. This alternative includes replacing the existing bridge with a new 4-lane Bascule Bridge. EPA has concurred with retaining this alternative but questioned whether the replacement bridge should have two lanes versus 4 lanes.
5. Existing Drawbridge. One final idea discussed with the NMFS and EPA was retaining the existing drawbridge in place of the two connectors at Queen and Pollock streets proposed in



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS

P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

IN REPLY REFER TO

September 27, 1999



Regulatory Division

Action ID No. 199800930, TIP No. R-3307, Relocation of US 70, Beaufort, Carteret County, North Carolina.

Mr. William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
Division of Highways
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Gilmore:

Reference our letter dated May 19, 1999, a letter from the Environmental Protection Agency dated May 27, 1999, and your letter dated April 12, 1999 on the North Carolina Department of Transportation proposal to replace the existing US Highway 70 (US 70) drawbridge with a high-rise bridge and to extend the highway as a multilane facility from four lanes at Radio Island to north of Pinners Point Road (SR 1303), Beaufort, Carteret County, North Carolina.

The purpose of this letter is to address the EPA concerns on the purpose and need and to clarify the alternatives to be carried forward in the Draft EIS (DEIS) for the proposed project. As you are aware, our concurrence on the purpose and need and the alternatives to be carried forward in the DEIS were provided in our letters of September 30, 1998 and May 19, 1999, respectively. We have concurred to carry forward alternatives 2A, 2B, 1A, 1B, 3A, Queen Street Connector, and the Pollock Street Connector.

Subsequent to our letter of May 19, 1999, the EPA by letter dated May 27, 1999 submitted comments on the purpose and need and alternatives to be carried forward in the DEIS. The EPA questioned the need for a high-speed bypass since Beaufort is the major eastern-most destination for US 70 traffic. In addition, the EPA recommended dropping Alternatives 1A and 1B and to carry forward Alternatives 3A and 3B. The EPA recommendation to drop Alternatives 1A and 1B was due to the significant impacts to wetlands and residential and commercial shorelines along the Gallants Channel shoreline. With regards to Alternative 3A and 3B, the EPA stated all aspects of traffic systems management should be considered. EPA further stated that NCDOT should consider two-lane one way traffic configurations with a mid-rise bascule bridge in order to reduce delays to marine traffic and existing land use disturbance of massive approaches to high-rise spans. Lastly, the EPA stated the needs statement should reflect the proposed freeway

Copies Furnished (with enclosure):

Mr. John Dorney
North Carolina Dept. of Environment and
Natural Resources
Water Quality Division
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Mr. Larry Hardy
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Ted Bisterfield
Wetlands Section, Region IV
Water Management Division
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Mr. John Hefner, Field Supervisor
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

BCF:

CESAW-RG-L/Jahnke
CESAW-RG-L/Timpy
CESAW-RG/Franklin

Mr. David Cox
Highway Coordinator
North Carolina Wildlife Resources
Commission
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Mrs. Renee Gledhill-Early
State Historic Preservation Office
109 E. Jones Street
Raleigh, North Carolina 27601-2807

Mr. Charles Jones, Manager
Morehead City Regional Office
North Carolina Division of Coastal
Management
Hestron Plaza Two
151-B Highway 24
Morehead City, North Carolina 28557

Mr. M. Ted Tyndall, District Manager
Morehead City Regional Office
North Carolina Division of Coastal
Management
Hestron Plaza Two
151-B Highway 24
Morehead City, North Carolina 28557

conjunction with Alternatives 1A/B and 2A/B. This idea was discussed by the project team and eliminated in the March 16, 1999 team meeting. In addition, the USCG has indicated to NCDOT its lack of support for this idea. Moreover, NCDOT projects that 18,000 vpd will use the connectors (Queen and Pollock Streets) in the design year. After discussions with the EPA and NMFS, it was agreed that the existing drawbridge would not adequately handle this volume of traffic. Lastly the EPA and NMFS recognize that the main intention of the proposed project is to replace the existing drawbridge with a high-rise bridge to alleviate traffic congestion caused by opening and closing of the existing bridge. Both the EPA and NMFS concur on eliminating this idea from further consideration.

Based on thorough discussions with the EPA and the NMFS it was decided that the alternatives concurred with in our letter dated May 19, 1999 should be carried forward in the DEIS. Additionally, based on the concurrence of NMFS and WRC and discussions described above, the EPA concurs with the purpose and need for the proposed project. The alternatives to be carried forward in the environmental document will include the Alternatives 2A, 2B, 1A, 1B, 3A, Queen Street Connector, and the Pollock Street Connector. In addition, a two-lane, one-way traffic configuration is to be addressed in the TSM section of the EIS. Descriptions of these alternatives were provided by NCDOT in its letter dated April 12, 1999 and shown on the attached map.

Should you have any questions please contact Mr. David L. Timpy, Wilmington Field Office, at (910) 251-4634.

Sincerely,



E. David Franklin
Special Projects Manager

Enclosure



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

May 19, 1999

IN REPLY REFER TO



Regulatory Division

Action ID No. 199800930, TIP No. R-3307, Relocation of US 70, Beaufort, Carteret County, North Carolina.

Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
Division of Highways
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

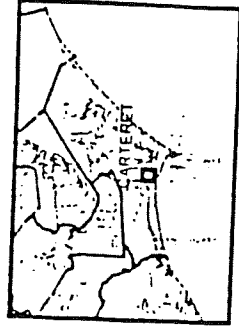
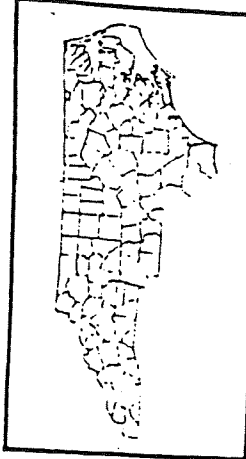
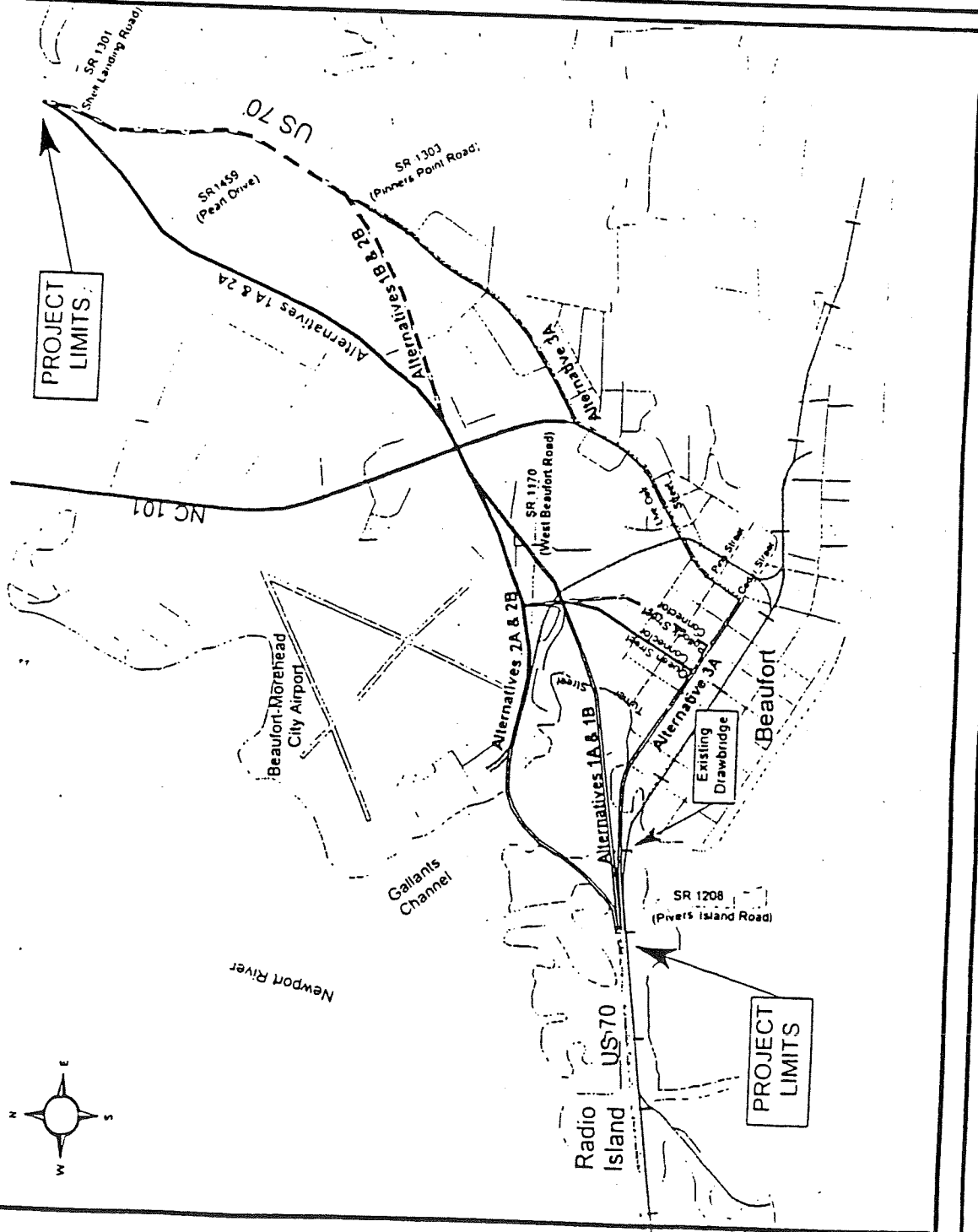
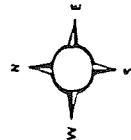
Dear Mr. Gilmore:

Reference your letters dated April 12, 1999 and March 9, 1999 on the North Carolina Department of Transportation proposal to replace the existing US Highway 70 (US 70) drawbridge with a high-rise bridge and to extend the highway as a multilane facility from four lanes at Radio Island to north of Pinners Point Road (SR 1303), Beaufort, Carteret County, North Carolina.

A project team meeting was held on March 16, 1999 to discuss the selection of alternatives, as shown on Figure 1B attached to your letter of April 12, 1999, to be studied in the draft environmental document. It was agreed during the meeting to eliminate Alternatives 1C, 2C, 3B, and the Turner Street Connector from further analysis. An additional alternative using the existing drawbridge for access to downtown Beaufort was also considered by the project team. However, concurrence was not obtained on this alternative because it would not satisfy the purpose and need of the project.

The project team also discussed eliminating Alternatives 1A, 1B, and 3A (Figure 1B) from further analysis. It is our understanding that your desire to eliminate these alternatives is based on comments received at the informational workshop held in the summer of 1998.

Your reasons for eliminating alternatives 1A and 1B include impacts to properties and commercial fisherman along Gallants Channel, displacement of some residents near West Beaufort Road, and higher bridge construction cost. However, these alternatives would avoid the Historic District and would not require a Section 4(f) evaluation. Because of these conflicting factors, the project team did not make a decision regarding Alternatives 1A and 1B.



Legend

- Roads (DOT 24k - no attributes)
- Railroad
- Interstate
- US
- NC
- SR
- City
- Other
- Airports / Substations
- Airport
- Hydro - Major Rivers/Streams (100k)
- Municipal Boundaries (24k)

North Carolina - Department of Transportation Division of Highways Project Development and Environmental Analysis Branch	
US 70 From Radio Island to North of SR 1303 Beaufort, Carteret County TIP No. R-3307	
0 1/4 1/2 3/4	0 1/4 1/2
(Kilometer)	(Mile)

FIGURE 1

Copies Furnished (with enclosure):

Mr. John Dorney
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
4401 Reedy Creek Road
Raleigh, North Carolina 27607

Mr. Charles Jones, Manager
Morehead City Regional Office
NC Division of Coastal Management
Hestron Plaza Two
151-B Highway 24
Morehead City, North Carolina 28557

Mr. Larry Hardy
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Mr. M. Ted Tyndall, District Manager
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61 Forsyth Street, SW
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Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. David Cox
North Carolina Wildlife Resources Commission
512 N. Salisbury Street
Raleigh, North Carolina 27604-1188

Mrs. Renee Gledhill-Early
State Historic Preservation Office
109 E. Jones Street
Raleigh, North Carolina 27601-2807

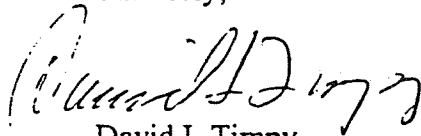
Your reasons for eliminating Alternative 3A include impacts to the Historic District that would require a Section 4(f) evaluation, impacts to properties and commercial fisherman along Gallants Channel, and displacement of some residents and businesses along Cedar Street. However, elimination of this alternative would result in a single bridge alignment and exclude an "improve existing facilities" alternative that would be carried forward in the environmental document. We recommend that multiple bridge alignments or designs, including a new drawbridge, be considered in the environmental document. Moreover, the environmental document should include an alternative that would improve existing facilities.

After review of all the information described above, we concur with the elimination of Alternatives 1C, 2C, 3B, and the Turner Street Connector from further analysis. However, we believe that alternatives 1A, 1B, and 3A should be carried forward in the environmental document. It is essential that the alternative analysis be thorough and complete to ensure adequate public interest review and to satisfy our requirements under the National Environmental Policy Act and Section 404(b)(1) guidelines.

In summary, the alternatives to be carried forward in the environmental document should include the Alternatives 2A, 2B, 1A, 1B, 3A, Queen Street Connector, and the Pollock Street Connector. These alternatives are shown in Figure 1 of your letter of April 12, 1999 (attached). We also recommend that in the future, proposed alternatives labels remain unchanged throughout the environmental analysis and that figures showing proposed alternatives are dated.

Should you have any questions please contact me at (910) 251-4634.

Sincerely,

A handwritten signature in dark ink, appearing to read "David L. Timpy", is written over a faint, circular official stamp.

David L. Timpy
Regulatory Project Manager



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

IN REPLY REFER TO

September 30, 1998

Regulatory Division

Action ID No. 199800930, TIP No. R-3307, Relocation of US 70, Beaufort, Carteret County, North Carolina.

Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
Division of Highways
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201



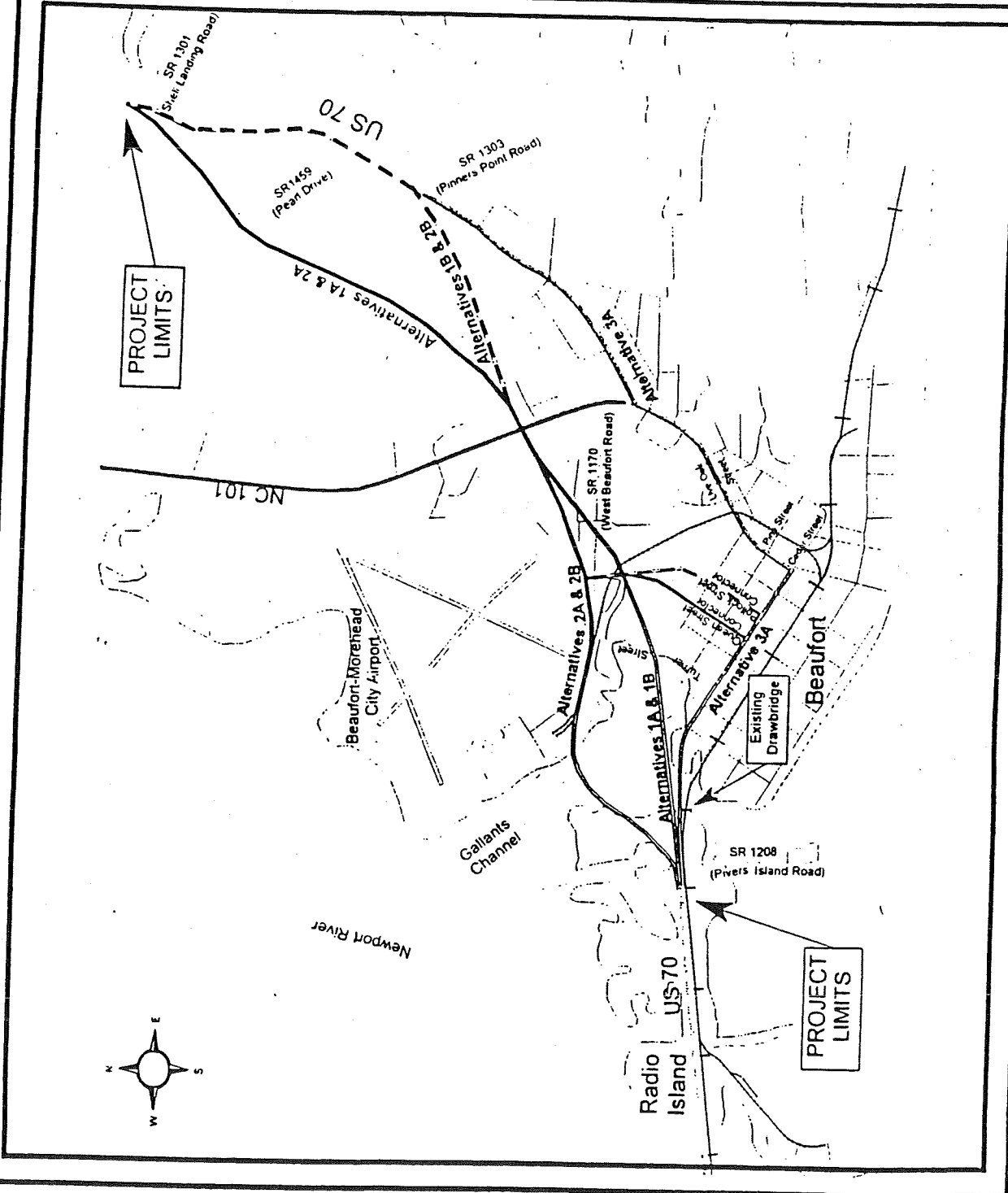
Dear Mr. Gilmore:

Reference your letter dated June 17, 1998, on the North Carolina Department of Transportation proposal to replace the existing US Highway 70 (US 70) drawbridge with a high-rise bridge and to extend the highway as a multilane facility from four lanes at Radio Island to north of Pinners Point Road (SR 1303), Beaufort, Carteret County, North Carolina.

The stated purpose and need of the proposed project as described in your letter referenced above is to eliminate travel delays occurring at the drawbridge and to increase the traffic carrying capacity of US 70 in the Beaufort area. Additionally, eight alignment alternatives are being considered.

The project will be processed in accordance with the procedures set forth in the interagency agreement to integrate Section 404 of the Clean Water Act with the National Environmental Protection Act requirements (NEPA). Accordingly, we concur with the stated purpose and need and the eight alternatives as described as set forth in your letter.

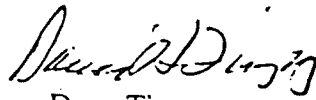
The environmental documentation for the proposed project should address the issues discussed in the initial scoping meeting of February 17, 1998, that were identified in your letter of March 11, 1998. Additionally, it is advised that recommendations by the US Fish & Wildlife Service provided in its letter dated July 28, 1998, be utilized to ensure that concerns pertaining to the waters of the United States, including wetlands, are considered at this early stage.



Appendix E
Air Quality and
Traffic Noise Data

Should you have any questions please contact me at (910) 251-4634.

Sincerely,



Dave Timpy
Regulatory Project Manager
Wilmington Field Office

Copies Furnished:

Mr. John Dorney
Division of Water Quality
N C Department of Environment
and Natural Resources
4401 Reedy Creek Road
Raleigh, North Carolina 27607

Mr. John Hefner, Field Supervisor
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Larry Hardy
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Mrs. Kathy Matthews
Wetlands Section, Region IV
U. S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Mr. David Cox
N C Wildlife Resources Commission
512 N. Salisbury Street
Raleigh, North Carolina 27604-1188

Mrs. Debbie Bevins
Mrs. Renee Gledhill-Early
State Historic Preservation Office
109 E. Jones Street
Raleigh, North Carolina 27601-2807

Mr. M. Ted Tyndall, District Manager
Morehead City Regional Office
North Carolina Division of Coastal Management
Hestron Plaza Two
151-B Highway 24
Morehead City, North Carolina 28557

TABLE N2

NOISE ABATEMENT CRITERIA

CRITERIA FOR EACH FHWA ACTIVITY CATEGORY HOURLY A-WEIGHTED SOUND LEVEL - DECIBELS (dBA)		
Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities are essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: Title 23 Code of Federal Regulations (CFR) Part 772, U. S. Department of Transportation, Federal Highway Administration.

CRITERIA FOR SUBSTANTIAL INCREASE HOURLY A-WEIGHTED SOUND LEVEL - DECIBELS (dBA)	
Existing Noise Level in Leq(h)	Increase in dBA from Existing Noise Levels to Future Noise Levels
< 50	>= 15
>= 50	>= 10

Source: North Carolina Department of Transportation Noise Abatement Policy.

TABLE N1

HEARING: SOUNDS BOMBARDING US DAILY

D E C I B E L S	140	Shotgun blast, jet 30m away at takeoff	PAIN
		Motor test chamber	HUMAN EAR PAIN THRESHOLD
	130 ----	-----	-----
		Firecrackers	
	120	Severe thunder, pneumatic jackhammer	
		Hockey crowd	
		Amplified rock music	UNCOMFORTABLY LOUD
	110 ----	-----	-----
		Textile loom	
	100	Subway train, elevated train, farm tractor	
		Power lawn mower, newspaper press	
		Heavy city traffic, noisy factory	LOUD
	90 ----	-----	-----
		Diesel truck 65 km/h at 15m away	
	80	Crowded restaurant, garbage disposal	
		Average factory, vacuum cleaner	
		Passenger car 80 km/h at 15m away	MODERATELY LOUD
	70 ----	-----	-----
		Quiet typewriter	
	60	Singing birds, window air-conditioner	
		Quiet automobile	
		Normal conversation, average office	QUIET
	50 ----	-----	-----
		Household refrigerator	
		Quiet office	VERY QUIET
	40 ----	-----	-----
		Average home	
	30	Dripping faucet	
		Whisper at 1.5m away	
	20	Light rainfall, rustle of leaves	
		AVERAGE PERSON'S THRESHOLD OF HEARING	
		Whisper	JUST AUDIBLE
	10 ----	-----	-----
	0	THRESHOLD FOR ACUTE HEARING	

Sources: World Book, Rand McNally Atlas of the Human Body, Encyclopedia America, "Industrial Noise and Hearing Conversation" by J. B. Olishifski and E. R. Harford (Researched by N. Jane Hunt and published in the Chicago Tribune in an illustrated graphic by Tom Heinz.)

TABLE N5

FHWA NOISE ABATEMENT CRITERIA SUMMARY

US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES	APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
	15m	30m	60m		A	B	C	D	E
Alternative 1A									
1 - Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0 44.5	0	1	2	0	0
2 - From Gallants Channel to West Beaufort	73.3	69.2	63.6	26.7 47.4	0	7	1	0	0
3 - From West Beaufort to NC 101	72.8	68.7	63.2	25.2 45.2	0	6	0	0	0
4 - From NC 101 to US 70	71.8	67.7	62.2	22.2 40.8	0	2	0	0	0
5 - From US 70 to End of Project	71.6	67.4	61.9	20.5 38.7	0	8	0	0	0
TOTALS --->					0	24	3	0	0
Alternative 1B									
1 - Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0 44.5	0	1	2	0	0
2 - From Gallants Channel to West Beaufort	73.3	69.2	63.6	26.7 47.4	0	7	2	0	0
3 - From West Beaufort to NC 101	72.8	68.7	63.2	25.2 45.2	0	0	0	0	0
4 - From NC 101 to SR 1303	71.8	67.7	62.2	22.2 40.8	0	19	2	0	0
5 - From SR 1303 to End of Project	71.6	67.4	61.9	20.5 38.7	0	12	0	0	0
TOTALS --->					0	39	6	0	0

1. 15m, 30m, and 60m distances are measured from the center of nearest travel lane.
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.

TABLE N5
FHWA NOISE ABATEMENT CRITERIA SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

Alternative ID	DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES	APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
		15m	30m	60m		A	B	C	D	E
1 -	Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0	0	1	2	0	0
2 -	From Gallants Channel to West Beaufort	73.3	69.2	63.6	26.7	0	7	1	0	0
3 -	From West Beaufort to NC 101	72.8	68.7	63.2	25.2	0	8	0	0	0
4 -	From NC 101 to US 70	71.8	67.7	62.2	22.2	0	4	0	0	0
5 -	From US 70 to End of Project	71.6	67.4	61.9	20.5	0	9	0	0	0
TOTALS --->						0	29	3	0	0
Alternative 1E	DESCRIPTION	Leq NOISE LEVELS (dBA)			CONTOUR DISTANCES	RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
		15m	30m	60m		A	B	C	D	E
1 -	Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0	0	1	2	0	0
2 -	From Gallants Channel to West Beaufort	73.3	69.2	63.6	26.7	0	6	0	0	0
3 -	From West Beaufort to NC 101	72.8	68.7	63.2	25.2	0	8	0	0	0
4 -	From NC 101 to US 70	71.8	67.7	62.2	22.2	0	2	0	0	0
5 -	From US 70 to SR 1301	71.8	67.7	62.2	22.2	0	13	2	0	0
6 -	From SR 1301 to End of Project	71.6	67.4	61.9	20.5	0	12	0	0	0
TOTALS --->						0	42	4	0	0

1. 15m, 30m, and 60m distances are measured from the center of nearest travel lane.
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.

TABLE N5
FHWA NOISE ABATEMENT CRITERIA SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES ⁹	APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
	15m	30m	60m		A	B	C	D	E
Alternative 2A									
1- Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0	44.5	0	0	0	0
2 - From Gallants Channel to Turner St.	73.3	69.2	63.6	26.7	47.4	0	0	3	0
3 - From Turner St. to NC 101	72.8	68.7	63.2	25.2	45.2	0	14	1	0
4 - From NC 101 to US 70	71.8	67.7	62.2	22.2	40.8	0	2	0	0
5 - From US 70 to End of Project	71.6	67.4	61.9	20.5	38.7	0	8	0	0
TOTALS --->					0	24	4	0	0
Alternative 2B									
1- Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0	44.5	0	0	0	0
2 - From Gallants Channel to Turner St.	73.3	69.2	63.6	26.7	47.4	0	0	3	0
3 - From Turner St. to NC 101	72.8	68.7	63.2	25.2	45.2	0	15	1	0
4 - From NC 101 to SR 1301	71.8	67.7	62.2	22.2	40.8	0	17	5	0
5 - From SR 1301 to End of Project	71.6	67.4	61.9	20.5	38.7	0	12	0	0
TOTALS --->					0	44	9	1	0

1. 15m, 30m, and 60m distances are measured from the center of nearest travel lane.
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.

TABLE N5
FHWA NOISE ABATEMENT CRITERIA SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES		APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
	15m	30m	60m	72 dBA	67 dBA	A	B	C	D	E
	73.3	69.1	63.6	24.0	44.5	0	0	0	0	0
Alternative 2D										
1- Proposed Bypass From Start of Project to Gallants Channel										
2 - From Gallants Channel to Turner St.	73.3	69.2	63.6	26.7	47.4	0	0	3	0	0
3 - From Turner St. to NC 101	72.8	68.7	63.2	25.2	45.2	0	16	1	0	0
4 - From NC 101 to US 70	71.8	67.7	62.2	22.2	40.8	0	0	0	0	0
5 - From US 70 to End of Project	71.6	67.4	61.9	20.5	38.7	0	9	0	0	0
TOTALS --->						0	25	4	0	0
Alternative 2E										
1- Proposed Bypass From Start of Project to Gallants Channel										
2 - From Gallants Channel to Turner St.	73.3	69.2	63.6	26.7	47.4	0	0	3	0	0
3 - From Turner St. to NC 101	72.8	68.7	63.2	25.2	45.2	0	17	1	0	0
4 - From NC 101 to US 70	71.8	67.7	62.2	22.2	40.8	0	4	0	0	0
5 - From US 70 to SR 1301	71.8	67.7	62.2	22.2	40.8	0	13	2	0	0
6 - From SR 1301 to End of Project	71.6	67.4	61.9	20.5	38.7	0	12	0	0	0
TOTALS --->						0	46	6	0	0

1. 15m, 30m, and 60m distances are measured from the center of nearest travel lane.
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.

TABLE N5
FHWA NOISE ABATEMENT CRITERIA SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES	APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772				
	15m	30m	60m		A	B	C	D	E
Alternative 3A				72 dBA	67 dBA				
1- Proposed Bypass From Start of Project to Gallants Channel	73.3	69.1	63.6	24.0	44.5	0	0	0	0
2 - From Gallants Channel to Turner St.	70.2	66.1	60.5	16.1	32.9	0	3	0	0
3 - From Turner St. to Live Oak St.	69.0	64.9	59.4	<14.7	28.2	0	14	3	0
4 - From Live Oak St. to NC 101	69.2	65.1	65.1	22.2	28.9	0	40	2	0
5 - From NC 101 to SR 1303	70.0	65.9	60.4	15.8	32.1	0	17	0	0
6 - From SR 1303 to SR 1301	71.8	67.7	62.2	22.2	40.8	0	13	2	0
7 - From SR 1301 to End of Project	71.6	67.4	61.9	20.5	38.7	0	12	0	0
TOTALS --->					0	99	7	0	0

1. 15m, 30m, and 60m distances are measured from the center of nearest travel lane.
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.

TABLE N6
TRAFFIC NOISE LEVEL INCREASE SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES						SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	1-4	5-9	10-14	15-19	20-24	>=25	
Alternative 1A								
1 - Start of Project to Gallants Channel	0	0	1	1	2	0	0	3
2 - From Gallants Channel to West Beaufort	0	2	0	4	5	2	0	8
3 - From West Beaufort to NC 101	0	1	6	5	4	0	0	6
4 - From NC 101 to US 70	0	2	2	2	2	0	0	2
5 - From US 70 to End of Project	0	2	8	0	0	0	0	0
TOTALS --->	0	7	17	12	13	2	0	19
								13
DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES						SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	1-4	5-9	10-14	15-19	20-24	>=25	
Alternative 1B								
1 - Start of Project to Gallants Channel	0	0	1	1	2	0	0	3
2 - From Gallants Channel to West Beaufort	0	2	0	4	5	2	0	9
3 - From West Beaufort to NC 101	0	1	10	2	3	0	0	5
4 - From NC 101 to SR 1303	0	2	21	0	0	1	1	2
5 - From SR 1303 to End of Project	0	0	11	1	0	0	0	1
TOTALS --->	0	5	43	8	10	3	1	20
								13

"1" As defined by only a substantial increase (See bottom of TABLE N2).

"2" As defined by both criteria in TABLE N2.

TABLE N6
TRAFFIC NOISE LEVEL INCREASE SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							
		1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 1D									
1 - Start of Project to Gallants Channel	0	0	1	1	2	0	0	3	1
2 - From Gallants Channel to West Beaufort	0	2	0	4	5	2	0	8	6
3 - From West Beaufort to NC 101	0	2	6	6	7	0	0	8	6
4 - From NC 101 to US 70	0	2	4	4	3	0	0	4	3
5 - From US 70 to End of Project	1	1	9	0	0	0	0	0	0
TOTALS --->	1	7	20	15	17	2	0	23	16
DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							
		1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 1E									
1 - Start of Project to Gallants Channel	0	0	1	1	2	0	0	3	1
2 - From Gallants Channel to West Beaufort	0	2	0	4	5	2	0	8	6
3 - From West Beaufort to NC 101	0	2	6	6	7	0	0	8	6
4 - From NC 101 to US 70	0	4	3	3	2	0	0	2	0
5 - From US 70 to SR 1301	0	1	19	0	0	0	0	0	0
5 - From SR 1301 to End of Project	0	0	11	1	0	0	0	1	1
TOTALS --->	0	9	40	15	16	2	0	22	14

"1" As defined by only a substantial increase (See bottom of TABLE N2).

"2" As defined by both criteria in TABLE N2.

TABLE N6
TRAFFIC NOISE LEVEL INCREASE SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 2A									
1 - Start of Project to Gallants Channel	0	2	0	0	0	0	0	0	0
2 - From Gallants Channel to Turner St.	0	0	0	0	3	0	0	3	1
3 - From Turner St. to NC 101	0	0	23	10	8	0	0	13	9
4 - From NC 101 to US 70	0	1	2	4	2	0	0	2	0
5 - From US 70 to End of Project	0	2	8	0	0	0	0	0	0
TOTALS --->	0	5	33	14	13	0	0	18	10
DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 2B									
1 - Start of Project to Gallants Channel	0	2	0	0	0	0	0	0	0
2 - From Gallants Channel to Turner St.	0	0	0	0	3	0	0	3	1
3 - From Turner St. to NC 101	0	0	23	10	9	0	0	14	11
4 - From NC 101 to SR 1301	0	0	1	21	0	1	1	22	16
5 - From SR 1301 to End of Project	0	0	11	1	0	0	0	1	1
TOTALS --->	0	2	35	32	12	1	1	40	29

"1" As defined by only a substantial increase (See bottom of TABLE N2).

"2" As defined by both criteria in TABLE N2.

TABLE N6

TRAFFIC NOISE LEVEL INCREASE SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	RECEPTOR EXTERIOR NOISE LEVEL INCREASES								
	<=0	1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 2D	0	2	0	0	0	0	0	0	0
1 - Start of Project to Gallants Channel	0	0	0	0	3	0	0	3	1
2 - From Gallants Channel to Turner St.	0	2	19	11	10	0	0	15	10
3 - From Turner St. to NC 101	1	4	3	6	0	0	0	0	0
4 - From NC 101 to US 70	1	1	9	0	0	0	0	0	0
5 - From US 70 to End of Project	2	9	31	17	13	0	0	18	11
TOTALS --->									
DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES							SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	RECEPTOR EXTERIOR NOISE LEVEL INCREASES								
	<=0	1-4	5-9	10-14	15-19	20-24	>=25		
Alternative 2E	0	2	0	0	0	0	0	0	0
1 - Start of Project to Gallants Channel	0	0	0	0	3	0	0	3	1
2 - From Gallants Channel to Turner St.	0	2	19	11	10	0	0	15	10
3 - From Turner St. to NC 101	0	0	5	3	3	0	0	3	1
4 - From NC 101 to US 70	0	1	19	0	0	0	0	0	0
5 - From US 70 to SR 1301	0	0	11	1	0	0	0	1	1
6 - From SR 1301 to End of Project	0	5	54	15	16	0	0	22	13
TOTALS --->									

"1" As defined by only a substantial increase (See bottom of TABLE N2).

"2" As defined by both criteria in TABLE N2.

TABLE N6
TRAFFIC NOISE LEVEL INCREASE SUMMARY
US 70 Bypass, Carteret County, TIP # R-3307

DESCRIPTION	RECEPTOR EXTERIOR NOISE LEVEL INCREASES						SUBSTANTIAL NOISE LEVEL INCREASE "1"	IMPACTS DUE TO BOTH CRITERIA "2"
	<=0	1-4	5-9	10-14	15-19	20-24		
Alternative 3A								
1- Start of Project to Gallants Channel	0	1	3	0	0	0	0	0
2 - From Gallants Channel to Turner St.	0	1	11	0	0	0	0	0
3 - From Turner St. to Live Oak St.	0	0	32	0	0	0	0	0
4 - From Live Oak St. to NC 101	0	0	54	0	0	0	0	0
5 - From NC 101 to SR 1303	0	0	31	0	0	0	0	0
6 - From SR 1303 to SR 1301	0	0	19	0	0	0	0	0
7 - From SR 1301 to End of Project	0	0	12	0	0	0	0	0
TOTALS --->	0	2	162	0	0	0	0	0

"1" As defined by only a substantial increase (See bottom of TABLE N2).

"2" As defined by both criteria in TABLE N2.